OLYMPUS®

DIGITAL VOICE RECORDER

WS-500M
WS-400S

DETAILED INSTRUCTIONS

**Thank you for purchasing an Olympus
Digital Voice Recorder.
Please read these instructions for information
about using the product correctly and safely.
Keep the instructions handy for future reference.**

**To ensure successful recordings, we recommend that
you test the record function and volume before use.**

EN

Introduction

- The contents of this document may be changed in the future without advanced notice. Contact our Customer Support Center for the latest information relating to product names and model numbers.
- The utmost care has been taken to ensure the integrity of the contents of this document. In the unlikely event that a questionable item, error, or omission is found, please contact our Customer Support Center.
- Any liability for passive damages or damage of any kind occurred due to data loss incurred by a defect of the product, repair performed by the third party other than Olympus or an Olympus authorized service station, or any other reason is excluded.

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- Microsoft, Windows and Windows Media are registered trademarks of Microsoft Corporation.
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- WOW XT, SRS and (●) symbol are trademarks of SRS Labs, Inc.
- WOW XT technology is incorporated under license from SRS Labs, Inc.
- The product was developed based on noise-canceling technology under license from NEC Corporation.

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Safe and proper usage

Before using your new recorder, read this manual carefully to ensure that you know how to operate it safely and correctly. Keep this manual in an easily accessible location for future reference.

• The warning symbols indicate important safety related information. To protect yourself and others from personal injury or damage to property, it is essential that you always read the warnings and information provided.

General Precautions

• **Do not leave the recorder in hot, humid locations such as inside a closed automobile under direct sunlight or on the beach in the summer.**
• **Do not store the recorder in places exposed to excessive moisture or dust.**
• **Do not use organic solvents such as alcohol and lacquer thinner to clean the unit.**
• **Do not place the recorder on top of or near electric appliances such as TVs or refrigerators.**
• **Avoid recording or playing back near cellular phones or other wireless equipment, as they may cause interference and noise. If you experience noise, move to another place, or move the recorder further away from such equipment.**
• **Avoid sand or dirt. These can cause irreparable damage.**
• **Avoid strong vibrations or shocks.**
• **Do not disassemble, repair or modify the unit yourself.**

• **Do not operate the unit while operating a vehicle (such as a bicycle, motorcycle, or go-cart).**
• **Keep the unit out of the reach of children.**

<Warning regarding data loss>
Recorded content in memory may be destroyed or erased by operating mistakes, unit malfunction, or during repair work.
It is recommended to back up and save important content to other media such as a computer hard disk.
Any liability for passive damages or damage of any kind occurred due to data loss incurred by a defect of the product, repair performed by the third party other than Olympus or an Olympus authorized service station, or any other reasons is excluded from the Olympus's liability.

Batteries

⚠ Danger:

• **Batteries should never be exposed to flame, heated, short-circuited or disassembled.**
• **Never store batteries where they will be exposed to direct sunlight, or subjected to high temperatures in a hot vehicle, near a heat source, etc.**

⚠ Warning:

• **Do not solder lead wires or terminals directly onto a battery or modify it.**
• **Do not connect the ⊕ and ⊖ terminals together. This may cause fire, overheating or electric shock.**

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- **When carrying or storing the batteries, be sure to put it in the provided case to protect its terminals. Do not carry or store the batteries with any metal objects (such as key rings). If this warning is not followed, fire, overheating or electric shock may occur.**
- **Do not connect the batteries directly to a power outlet or a cigarette lighter of an automobile.**
- **Do not insert the batteries with their ⊕ and ⊖ terminals reversed.**
- **If any liquid from a battery gets into your eyes, promptly wash it off with clean water and consult your doctor at once.**
- **Do not attempt to recharge alkaline, lithium or any other non-rechargeable batteries.**
- **Never use any batteries with a torn or cracked outer cover.**
- **Keep batteries out of the reach of children.**
- **If you notice anything unusual when using this product such as abnormal noise, heat, smoke, or a burning odor:**

  ① remove the batteries immediately while being careful not to burn yourself, and;

  ② call your dealer or local Olympus representative for service.

- **Do not expose the batteries to water. Do not allow water to contact the terminals.**
- **Do not remove or damage the batteries insulating sheet.**

- **Do not use the batteries if you find something wrong with them such as leakage, color change or deformity.**
- **Unplug the charger if the charging is still incomplete after the specified time it should take.**
- **Should any batteries liquid get on skin or clothing, promptly wash it off with clean water.**
- **Keep batteries away from fire.**

⚠ **Caution:**

- **Do not subject batteries to strong shocks.**
- **When using rechargeable batteries that have not been used for a while, be sure to recharge them before use.**
- **Rechargeable batteries have limited lifetime. When the operating time becomes shorter even if the rechargeable battery is fully charged under the specified condition, replace it with a new one.**

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Getting Started

Main features

Identification of parts

1 **EAR (Earphone) jack**
2 **MIC (Microphone) jack**
3 **Built-in stereo microphone (L)**
4 **Built-in stereo microphone (R)**
5 **Recording indicator light**
6 **LIST button**
7 **Strap hole**
8 **Display (LCD panel)**
9 **Built-in speaker**
10 **+ button**
11 **REC● (Record) button**
12 **I◀◀ button**

13 **MENU button**
14 **– button**
15 **INDEX/ERASE button**
16 **OK▶ button**
17 **▶▶I button**
18 **STOP■ button**
19 **Battery cover**
20 **HOLD switch**
21 **Mode (VOICE/MUSIC) switch***
   MIC SENSE CONF/DICT switch**
22 **USB connector slide lever**
23 **USB connector**
   * For WS-500M only.
   ** For WS-400S only.

Display (LCD panel)

Folder list display

⚠ **For WS-500M:**

When [VOICE] mode is selected:

❶
❷

```
Recorder          ■ 🔋
🅰 Folder A
🅱 Folder B
🅲 Folder C
🅳 Folder D
🅴 Folder E
♪H                 📁
```

When [MUSIC] mode is selected:

❸
❹

```
Music             ■ 🔋
📁 Music
  09-Title I.wma
  10-Title J.mp3

                   📁
```

❶ [VOICE] mode indicator
Record/ Playback status indicator
Battery indicator
❷ Folder name
❸ [MUSIC] mode indicator
Record/ Playback status indicator
Battery indicator
❹ Folder name

⚠ **For WS-400S:**

❶
❷

```
Recorder          ■ 🔋
🅰 Folder A
🅱 Folder B
🅲 Folder C
🅳 Folder D
🅴 Folder E
♪H                 📁
```

❶ [VOICE] mode indicator
Record/ Playback status indicator
Battery indicator
❷ Folder name

File list display

⚠ **For WS-500M:**

When [VOICE] mode is selected:

❶
❷

```
Folder A          ■ 🔋
  WS500001.WMA
▶ WS500002.WMA
  WS500003.WMA
  WS500004.WMA
  WS500005.WMA
♪H                 📁
```

When [MUSIC] mode is selected:

❸
❹

```
Album C           ■ 🔋
  01-Title A.wma
▶ 02-Title B.wma
  03-Title C.wma
  04-Title D.wma
  05-Title E.wma
                   📁
```

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Identification of parts

1 Folder name
   Record/ Playback status indicator
   Battery indicator
2 File name
3 Folder name
   Record/ Playback status indicator
   Battery indicator
4 File name

⚠ **For WS-400S:**

1 Folder name
   Record/ Playback status indicator
   Battery indicator
2 File name

File display

⚠ **For WS-500M:**

When [VOICE] mode is selected:
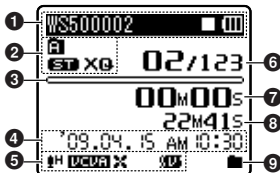
When [MUSIC] mode is selected:

⚠ **For WS-400S:**
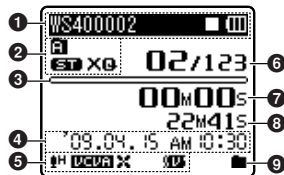
1 File name
   Record/ Playback status indicator
   Battery indicator
2 Folder indicator
   Recording mode indicator
3 During recording mode:
   Remaining memory bar indicator
   During playback mode:
   Playback position bar indicator
4 Recording date and time
5 [♪H] Microphone Sensitivity
      indicator
   [VCVA] VCVA indicator
   [N] Noise Cancel indicator
   [VF] Voice Filter indicator
   [✂] Low Cut Filter indicator
6 Current file number/ Total
   number of recorded files in the
   folder

Power supply

⓻ **During recording mode:**
Elapsed recording time
During playback mode:
Elapsed playback time
⓼ **During recording mode:**
Remaining recording time
During playback or stop mode:
File length
⓽ **Playback mode indicator**
❿ **Title name**
⓫ **Artist name**
⓬ **Album name**
⓭ **Elapsed playback time**
⓮ **[ ] WOW XT indicator**
[JAZZ] Equalizer indicator
⓯ **Current file number/ Total number of recorded files in the folder**
⓰ **File length**
⓱ **Playback mode indicator**

Inserting batteries

This recorder can be used with either Ni-MH Rechargeable Batteries or AAA Alkaline Batteries.

1 **Lightly press down on the arrow and slide the battery cover open.**
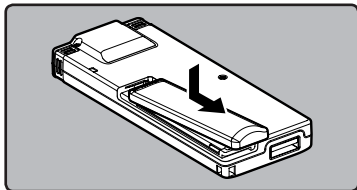
2 **Insert size-AAA alkaline battery, observing the correct ⊕ and ⊖ polarities.**
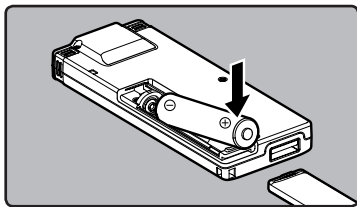
⚠ **For WS-500M:**

- When charging with the recorder, be sure to use the supplied specified Ni-MH rechargeable (BR401) batteries.
- The supplied rechargeable batteries are not fully charged. Before using the unit or after long periods of disuse, it is recommended that you continuously charge them until full (☞ P.12).

⚠ **For WS-400S:**

> • This recorder cannot charge rechargeable batteries.

3 Close the battery cover completely by pressing to the direction Ⓐ, then sliding to the direction Ⓑ.
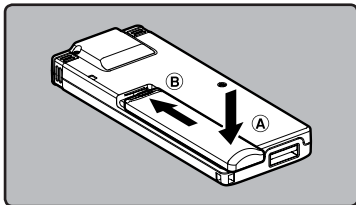
> • If the "**hour**" indicator flashes in the display, see "**Setting time and date [Time & Date]**" (☞ P.15).

Battery indicator

The battery indicator on the display changes as the batteries loose power.

$$ \text{□□□} \rightarrow \text{□□} \rightarrow \text{□} $$

• When [▉] appears on the display, replace the batteries as soon as possible. When the batteries are too weak, [▭] and [**Battery Low**] appears on the display and the recorder shuts down.

Notes

• Manganese batteries may not be used in this recorder.
• When changing batteries, AAA alkaline batteries or Olympus Ni-MH rechargeable batteries are recommended.

• Be sure to stop the recorder before replacing the batteries. Unloading the batteries while the recorder is in use may corrupt the file. If you are recording into a file and the batteries run out, you will loose your currently recorded file because the file header will not be able to close. It is crucial to change the batteries once you see only one Hash mark in the battery indicator.
• If it takes longer than 1 minute to replace the dead batteries or if you take the batteries in and out repeatedly at short intervals, you may have to reset the time when you have loaded fresh batteries (☞ P.15).
• Remove the batteries if you are not going to use the recorder for an extended period of time.
• When playing a voice/music file, the recorder may be reset due to the reduction of the voltage output of the batteries depending on the volume level even if [□□□] is displayed in the battery indicator. In this case, lower the volume of the recorder.
• When replacing rechargeable batteries, be sure to use Ni-MH rechargeable batteries (optional). The use of other manufacturers' products can damage the recorder and should be avoided.

Charging by connecting to a computer via USB

⚠ **For WS-500M:**

You can charge the batteries by connecting to a PC's USB port. When charging, be sure to correctly place the rechargeable batteries (supplied) into the recorder (☞ P.10).

1 **Boot the PC.**

2 **Slide the USB connector slide lever in the direction indicated by the arrow to eject the USB connector out of the recorder.**
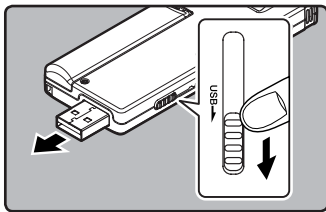
3 **While pressing the STOP ■ button, connect to the PC's USB port.**


```
Time & Date   ■ ⏻
  '09.04.15 AM10:30
Remain
 ST XQ     32H12M54S
               1.8GB

Batt. Charge mode
```
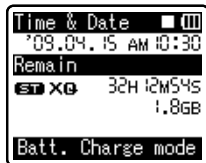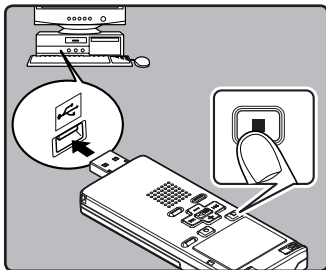
Notes

- The recorder cannot be charged when the PC is not turned on. Also, it may not be charged when the PC is in standby mode.
- Do not charge the recorder with the USB hub connected.
- If [**Cannot charge**] is displayed, it means that a battery that cannot be charged is in the recorder. Replace the batteries with supplied ones at once (☞ P. 10).
- Charging is completed when battery indication becomes to [⏻] (charging time: approximately 3 hours *).
  * It shows the approximate time when charging the rechargeable battery fully from no remaining power at the room temperature. The charging time will be changed depending on the remaining amount and the state of batteries.
- You cannot charge when [⏼]* or [⏻]** blinks. Charge the batteries at the temperature from 5°C to 35°C (41°F to 95°F).
  * [⏼]: When surrounding temperature is lower than 5°C (41°F).
  ** [⏻]: When surrounding temperature is higher than 35°C (95°F).
- When using time becomes notably short even after the batteries are fully charged, replace them with new ones.
- Be sure to push the USB connector all the way in. Otherwise, the recorder may not operate properly.
- Use the supplied USB extension cable depending on situations.

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Power supply

Cautions concerning the rechargeable batteries

Read the following descriptions carefully when you use the Ni-MH rechargeable batteries.

Discharging:

The rechargeable batteries self-discharge while this is not in use. Be sure to charge them regularly before use.

Operating temperature:

The rechargeable batteries are chemical products. The rechargeable batteries efficiency may fluctuate even when operating within the recommended temperature range. This is an inherent nature of such products.

Recommended temperature range:

When operating appliance:
  0°C - 42°C/ 32°F - 107.6°F
Charging:
  5°C - 35°C/ 41°F - 95°F
Storage for a long period:
  –20°C - 30°C/ –4°F - 86°F

Using the rechargeable batteries outside the above temperature range may result in declining efficiency and shorter battery life. In order to prevent battery leakage or rust, remove the rechargeable batteries from the products when you will not be using them for a long time, and store them separately.

Notes

- This recorder is designed to fully charge batteries regardless of their energy level. However, for best results when charging newly purchased rechargeable batteries or batteries that have not been used for a long time (more than one month), It is recommended to fully charge the batteries then discharge repeatedly for 2 to 3 times.
- When disposing rechargeable batteries, always observe the local laws and regulations. Contact you local recycling center for proper disposal methods.

- If Ni-MH rechargeable batteries are not fully discharged, protect against short-circuiting (e.g. by taping the contacts) before disposing.

For customers in Germany:

Olympus has a contract with the GRS (Joint Battery Disposal Association) in Germany to ensure environmentally friendly disposal.

Turning on/off the power

When the recorder is not being used, turn the power off to reduce battery consumption to a minimum. Even if the power is turned off, existing data, mode settings, and clock settings will be maintained.

Turning on the power

Slide the HOLD switch in the opposite direction that indicated by the arrow.
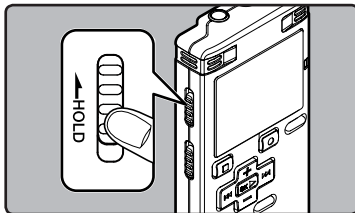
- The display will turn on, and the power will be turned on.
- The resume function will bring the recorder back to the stop position in memory before power was turned off.

Turning off the power

While the recorder is during stop mode, slide the HOLD switch in the direction indicated by the arrow.

- The display shuts off, and the power will be turned off.
- The resume function remembers the stop position before the power is turned off.

Power save mode

If the recorder is stopped/not used for over 5 minutes after it is turned on, it goes into standby (power-save) mode, and the display shuts off.

- To exit standby mode and turn on the display, press any button.

If you bring the recorder is set to HOLD mode, the running conditions will be preserved, and all buttons will be disabled. This feature is useful when the recorder has to be carried in a bag or pocket.

Set the recorder to HOLD mode

While the recorder is during stop mode, slide the HOLD switch in the direction indicated by the arrow.
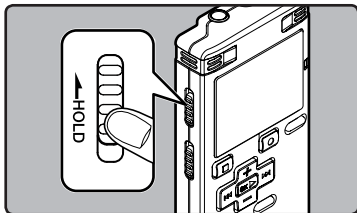
- After [**Hold**] appears on the display, the recorder is set to HOLD mode.

Exit HOLD mode

Slide the HOLD switch in the opposite direction that indicated by the arrow.
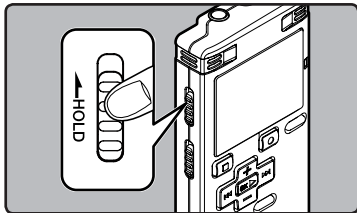
Notes

- If you press any button in HOLD mode, the clock display flashes for 2 seconds, but it will not operate the recorder.

• If HOLD is applied during playback (recording), operation is disabled with the playback (recording) state unchanged (When playback has ended and the recording has ended due to the remaining memory being used up, it will stop).

Setting time and date [Time & Date]

If you set the time and date beforehand, the information when the file is recorded is automatically stored for each file. Setting the time and date beforehand enables easier file management.

When you use the recorder for the first time after purchasing it, or when the batteries have been inserted without the device having been used in a long time, the [Set Time & Date] will appear. When the "hour" is flashing, conduct the setup from Step 1.

LIST button

+− button
▶▶|◀◀ button
OK▶ button
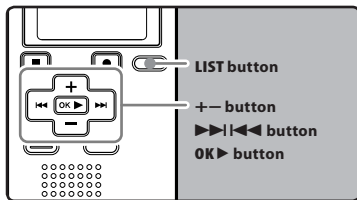
1 Press the ▶▶| or |◀◀ button to select the item to set.

• Select the item from the "**hour**", "**minute**", "**year**", "**month**" and "**day**" with a flashing point.
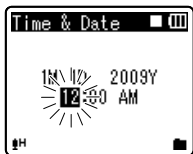
2 Press the + or − button to set.

• Follow the same steps by pressing the ▶▶| or |◀◀ button to select the next item, and press the **+** or **−** button to set.
• You can select between 12 and 24 hour display by pressing the **LIST** button while setting the hour and minute.
  Example: 10:38 P.M

  10:38 PM ◀──────▶ 22:38
  (Initial setting)

• You can select the order of the "**month**", "**day**" and "**year**" by pressing the **LIST** button while setting them.
  Example: April 15, 2009

  4M 15D 2009Y (Initial setting) ◀

  15D 4M 2009Y

  2009Y 4M 15D

3 Press the OK▶ button to complete the setting.

1

HOLD/Setting time and date

15

- The clock will start from the set date and time. Press the **OK ▶** button according to the time signal.

Time & Date ■ □□

4M15D 2009Y
10:20 AM

Note

- If you press the **OK ▶** button during the setup operation, the recorder will save the items that were set to that point.

Changing the time and date

While the recorder is during stop mode, press and hold the **STOP ■** button to display the [**Time & Date**], and [**Remain**]. If the current time and date is not correct, set it using the procedure below.
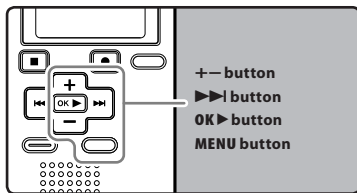
+— button
▶▶I button
OK ▶ button
MENU button

1 While the recorder is during stop mode, press the MENU button.

- The menu will appear on the display (☞ P.36).

File Menu ■ □□

🗐 Erase Lock
  Replace
  Property

2 Press the + or — button to select [Device Menu] tab.

- You can change the menu display by moving the settings tab cursor.

Device Menu ■ □□

🗐 Time & Date
  Reset Settings
  Format
  System info.

3 Press the OK ▶ or ▶▶I button to move the cursor to the item to set.

- [**Device Menu**] will appear on the display.

Device Menu ■ □□

🗐 Time & Date
  Reset Settings
  Format
  System info.

4 Press the OK ▶ or ▶▶I button.

- [**Time & Date**] will appear on the display.
- The "**hour**" will flash on the display, indicating the start of the Time and Date setup process.

The following steps are the same as Step 1 through Step 3 of "**Setting time and date [Time & Date]**" (☞ P.15).

5 Press the MENU button to close the menu screen.

[VOICE] mode and [MUSIC] mode

⚠ For WS-500M:

This device can be used as a voice recorder or as a music player. For recording and playback voice recordings, set the mode switch to [**VOICE**]. For listening to music, set the mode switch to [**MUSIC**].

[VOICE] mode:

Slide the mode switch to [VOICE] position.
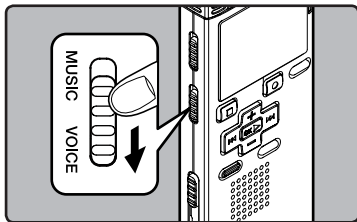
• This recorder functions as an IC recorder. See "**About the folders for voice recordings**" regarding the destination of saved files (☞ P.18).

[MUSIC] mode:

Slide the mode switch to [MUSIC] position.
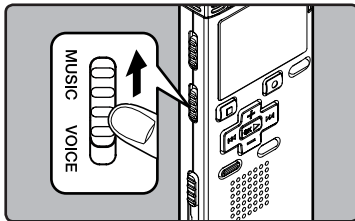
• The recorder functions as a music player. See "**About the folder for music playback**" for transferring music files to the recorder using Windows Media Player (☞ P.19).

Notes on the folders

The voice files and the music files are separated into folders for voice recordings and folders for music playback that are organized in a branching tree-style and saved.

About the folders for voice recordings

[**Folder A**] - [**Folder E**] are the folders for voice recordings. When recording with the recorder, select any one of the five folders and then record.

Each folder can store up to 200 files.
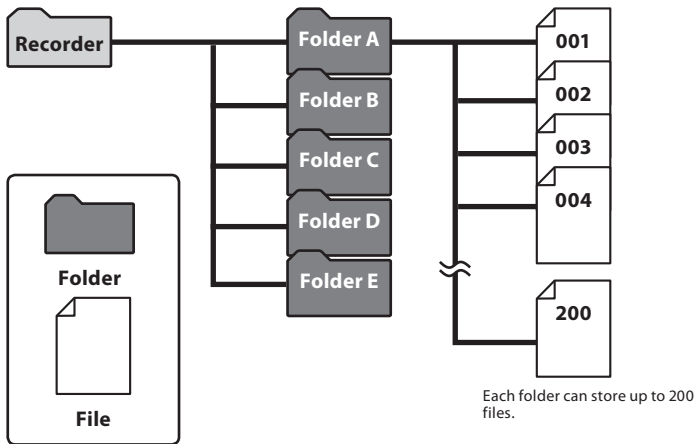
File names will be automatically created for files recorded by this recorder.

WS50 0001 .WMA

① ② ③

① **User ID:**
The user ID name that has been set on the Digital Voice Recorder.

② **File number:**
A serial number automatically assigned by a Digital Voice Recorder.

③ **Extension:**
These are the file name extensions for the recording format when recording with this device.
• WMA format .WMA

For WS-500M:

About the folder for music playback

When transferring music files to the device using Windows Media Player, a folder is automatically created within the music playback folder which has a layered structure as shown in the diagram below. Music files that are in the same folder can be rearranged in preferential order and replayed (☞ P.45).

Each folder can store up to 200 files.

Up to 128 folders can be created under the [**Music**] folder, including [**Music**].
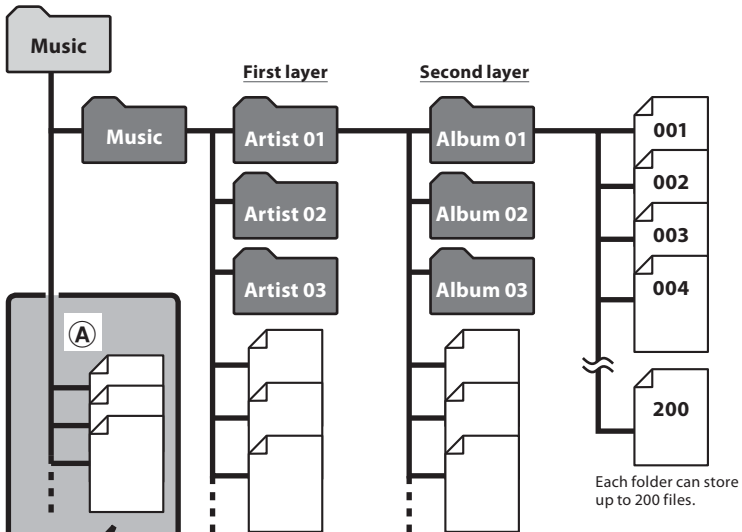
Precautions for transferring music files:

When using Windows Media Player 10, click [**Start Sync**] instead of setting the synchronization options. All the files will be transferred to the part Ⓐ above (☞ P.57).

Folder	**File**

Selecting the folders and files

Change folders while the operation is stopped or played back. For information on the layered structure of the folders, see the section entitled "**Notes on the folders**" (☞ P.18, P.19).

Operation of the folders for music playbacks:

🎵 For WS-500M:

Folder list display	Folder list display (First layer)	Folder list display (Second layer)	File list display

Music ■ 🔋
▶ Music
09-Title I.wma
10-Title J.mp3

→ ← ∎ ∎ ∎

Music ■ 🔋
■ Artist A
▶ ■ Artist B
■ Artist C
06-Title F.wma
07-Title G.wma

→ ← ∎ ∎ ∎

Artist B ■ 🔋
■ Album A
■ Album B
▶ ■ Album C
■ Album D
08-Title H.wma

→ ← ∎ ∎ ∎

Album C ■ 🔋
01-Title A.wma
▶ 02-Title B.wma
03-Title C.wma
04-Title D.wma
05-Title E.wma

02-Title B ■ 🔋
02/15
🎵 Title B
🎤 Artist B
💿 Album C
00m00s   03m04s

File display

- -
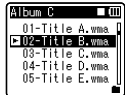
Operation of the folders for voice recordings:
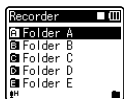
Folder list display	File list display	File display

Recorder ■ 🔋
🎙 Folder A
🎙 Folder B
🎙 Folder C
🎙 Folder D
🎙 Folder E

→ ← ∎ ∎ ∎

Folder A ■ 🔋
WS500001.WMA
▶ WS500002.WMA
WS500003.WMA
WS500004.WMA
WS500005.WMA

→ ← ∎ ∎ ∎

WS500002 ■ 🔋
🔴 ✕0   02/123
00m00s
22m41s
'09.04.15 AM 10:30
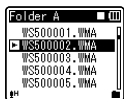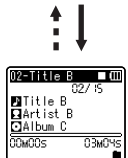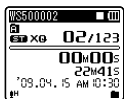
Moving through the levels

LIST button	**OK ▶ button**
Return ◀━━	**Proceed** ━━▶
Each time you press this it returns up one level. The list display can be operated by the ▮◀◀ button. When you press and hold the **LIST** button while moving in a hierarchy of folders, it will return to the file display.	Each time you press this it opens the folder or file selected in the list display and proceeds down one level. The list display screen can be operated by the ▶▶▮ button.
	+ or − button
	Select the folder or file.

File display

Information of the selected file is displayed. Enters in playback standby mode.

List display

The folders and files recorded in this recorder are displayed.

About Recording

Recording

Before starting recording, select a folder between [🗀] to [🗀]. These five folders can be selectively used to distinguish the kind of recording; for example, Folder [🗀] might be used to store private information, while Folder [🗀] might be dedicated to holding business information.

STOP ■ button
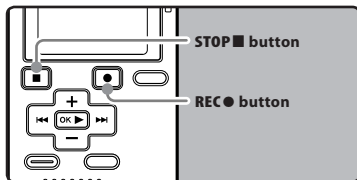
REC ● button

⚠ For WS-500M:

• If the **REC ●** button is pressed while the mode switch is set to [**MUSIC**], [**Music Mode**] will flash on the display. Set the mode switch to [**VOICE**] before recording (☞ P.17).

1 Select the recording folder (☞ P.18 to P.20).

How to change folders:
① Pressing the **LIST** button at the file display while stopped will return you to the next higher level. Pressing the **LIST** button repeatedly will bring you to the folder list display.
② Pressing button **+** or **−** at the folder list display will select the folders for voice recordings.
• Newly recorded audio will be saved as the last file in the selected folder.

2 Press the REC ● button to start recording.

• The recording indicator light glows and [●] will appear on the display.
• Turn the microphone in the direction of the source to be recorded.

ⓐ Recording mode
ⓑ Remaining memory bar indicator
ⓒ Remaining recording time
ⓓ Elapsed recording time
ⓔ Level meter (change according to the recording level and recording function settings)
• [**Rec Mode**] cannot be changed in the recording standby mode or while recording. Configure this while the recorder is stopped (☞ P.36, P.38).

3 Press the STOP ■ button to stop recording.

• [■] will appear on the display.
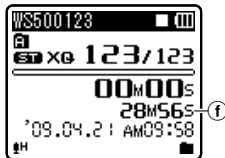
ⓕ File length

Notes

- To ensure recording from the beginning, start speaking after you see the recording indicator light on.
- When remaining recording time is less than 60 seconds, the recording indicator light starts flashing. When the recording time is decreasing to 30 or 10 seconds, the light flashes faster.
- [**Folder Full**] will appear when the folder capacity is full. Delete any unnecessary files before recording any further (☞ P.34).
- [**Memory Full**] will appear when the memory is full. Delete any unnecessary files before recording any further (☞ P.34).

Pause

While the recorder is during recording mode, press the REC● button.
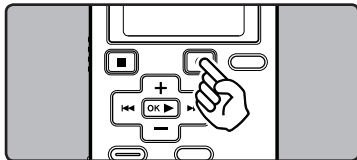
- [❙❙] will appear on the display.
- The recorder will time out after 60 minutes when left in "Rec Pause".

Resume Recording:

Press the REC● button again.

- Recording will resume at the point of interruption.

To quickly check on the recorded contents

While the recorder is during recording mode, press the OK▶ button.
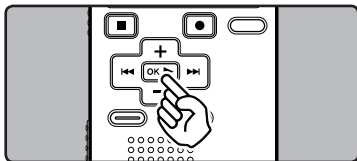
- [▶] will appear on the display.
- Stop recording and the file that was just recorded will be played back.

Listening while audio is recorded

If you start recording after inserting the earphone into the **EAR** jack on the recorder, you can hear the sound being recorded. The recording monitor volume can be adjusted by pressing the **+** or **−** button.

Connect the earphone to the EAR jack on the recorder.

To **EAR** jack
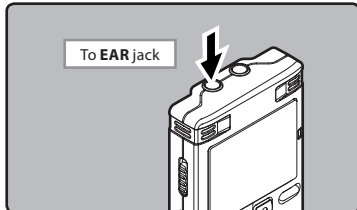
- After recording has started, you can hear the sound being recorded through the earphone.

Notes

- Recording level cannot be controlled using the volume button.
- When using the earphones, do NOT set the volume too high. Listening at very high volume may lead to hearing loss.
- Do not place earphones near a microphone as this may cause feedback.
- When the external speaker is connected while recording, there is a risk that audio feedback will occur.

Microphone sensitivity

Microphone sensitivity is adjustable to meet recording needs.

⚠ For WS-500M:

- Set the microphone sensitivity function using the menu display (☞ P.36 P.38).

⚠ For WS-400S:

Slide the MIC SENSE CONF/DICT switch to select [CONF] or [DICT].
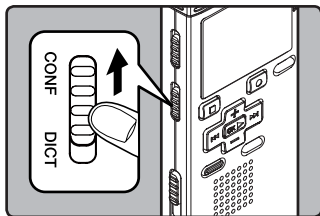
[**CONF**]:
  This is a highly sensitive mode which can record surrounding noises.
[**DICT**]:
  This is the standard level of microphone sensitivity. Select this mode for cases where the volume of the source sound is high, such as a band performance.

Note

- When you would like to clearly record a speaker's voice, set the **MIC SENSE CONF/DICT** switch to [**DICT**] and hold the recorder's built-in stereo microphone close to the speaker's mouth (5-10 cm) before recording.

2

Recording

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Recommended settings by recording condition

The recorder is initially set to the [**ST XQ**] mode so that you can make high quality stereo recordings immediately after purchasing it. The various functions relating to recording can be configured in detail to suit the recording conditions.

Recording condition	Recommended settings		
	Recording Mode (☞ P.36, P.38)	Microphone Sensitivity (☞ P.23 or P.36, P.38)	Low Cut Filter (☞ P.36, P.39)
Conferences with large crowds and lectures in large rooms.	[**ST XQ**]	[**CONF**] or [**Conference**]	[**On**]
Meetings and business negotiations with a small number of people.	[**ST XQ**] [**ST HQ**] [**HQ**]		
Dictation with a lot of background noise.	[**ST XQ**] [**ST HQ**] [**HQ**]	[**DICT**] or [**Dictation**]	
Music playing, wild birds singing, and railway sounds.	[**ST XQ**]	Set the microphone sensitivity according to the volume being recorded.	[**Off**]
Dictation in a quiet environment.	There is no particular recommendation. Choose a setting for recording.		

Recording from external microphone or other devices

The external microphone and other devices can be connected and the sound can be recorded. Connect as follows by the device to be used.

• Do not plug and unplug devices into the recorder's jack while it is recording.

Recording with external microphone:

Connect an external microphone to the MIC jack of the recorder.

To **MIC** jack
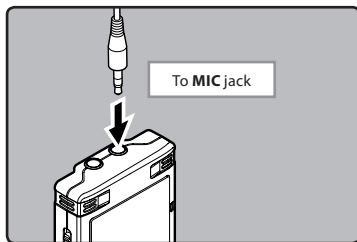
Applicable external microphones (optional) (☞ P.68)

Stereo microphone: ME51S
The built-in large-diameter microphone enables sensitive stereo recording.

2 channel microphone (omni-directional): ME30W
These are highly sensitive omni-directional microphones supported by plug-in power which are well-suited to recording musical performances.

Highly sensitive noise-cancellation monaural microphone (unidirectional): ME52W
This microphone is used to record sound at a distance while minimizing surrounding noise.

Tie clip microphone (omni-directional): ME15
Small concealing microphone with a tie-clip.

Telephone pickup: TP7
Earphone type microphone can be plugged into your ear while phoning. The voice or conversation over the phone can be clearly recorded.

Notes

• The built-in microphone will become inoperable when an external microphone is plugged into the recorder's **MIC** jack.
• Microphones supported by plug-in power can also be used.
• When the external stereo microphone is used while [**Rec Mode**] is set to a monaural recording mode, audio will be recorded to the L channel only (☞ P.36, P.38).
• When an external monaural microphone is used while [**Rec Mode**] is set to a stereo recording mode, it enables recording only with the L channel microphone (☞ P.36, P.38).

2

Recording

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Recording the sound of other devices with this recorder:

The sound can be recorded when connecting to the audio output terminal (earphone jack) of the other device, and the **MIC** jack of the recorder with the connecting cord KA333 (optional) for dubbing.

To **MIC** jack

To audio output terminal of other devices
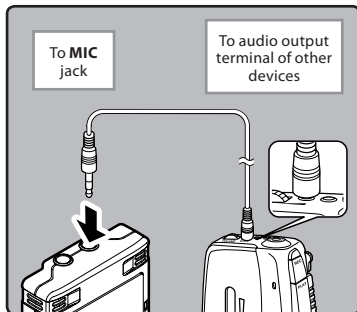
Note

• The detailed input levels cannot be adjusted with this recorder. When external devices are connected, perform a test recording and then adjust the output level for the external devices.

Recording the sound of this recorder with other devices:

The sound of this recorder can be recorded to other devices when connected to the audio input terminal (microphone jack) of other devices and the **EAR** jack of this recorder, with the connecting cord KA333 (optional) for dubbing.

To **EAR** jack

To audio input terminal of other devices
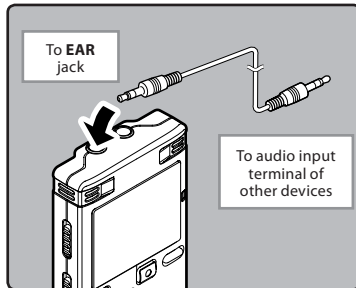
Note

• When you adjust the various sound quality settings related to playback on the recorder, the audio output signal sent out from the **EAR** jack will change as well (☞ P.36, P.40, P.41).

About Playback

Playback

The recorder can playback WAV*****, MP3***** and WMA format files. To playback a file recorded with other machines, you need to transfer (copy) it from a computer.
* For WS-500M only.

STOP ■ button
+− button
OK ▶ button
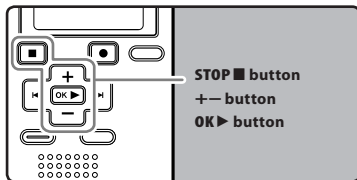
For WS-500M:

- When playing back files transferred from a PC, set the mode switch according to the folder type (☞ P.17).
- When playing back files recorded on the recorder, set the mode switch to [**VOICE**] (☞ P.17).

1 Select the folder which contains the files to be played back (☞ P.18 to P.20).

How to change folders:
① Pressing the **LIST** button at the file display during playback or while stopped will return you to the next higher level. Pressing the **LIST** button repeatedly will bring you to the folder list display.
② Pressing button **+** or **−** at the folder list display will select the folders for voice recordings and press the **OK ▶** or **▶▶I** button.

2 In the File list display, press the + or − button to select the file that you want to playback.

- In the File display, press the **▶▶I** or **I◀◀** button to select a file.

3 Press the **OK ▶** button to start playback.

- [▶] will appear on the display.
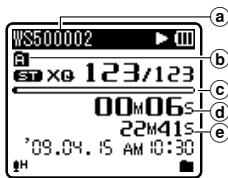
ⓐ File name
ⓑ Folder indicator
ⓒ Playback position bar indicator
ⓓ Elapsed playback time
ⓔ File length

4 Press the + or − button to adjust to a comfortable listening volume.

- The volume can be adjusted within a range from [**00**] to [**30**].

5 Press the **STOP ■** button at any point you want to stop the playback.

- [■] will appear on the display.
- This will stop the file being played back midway. When the resume function is activated the stopped location will be registered, even if the power is turned off. The next time the power is turned on, playback may be resumed from the registered stopped location.

3

Playback

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Forwarding

While the recorder is during stop mode in the file display, press and hold the ▶▶I button.
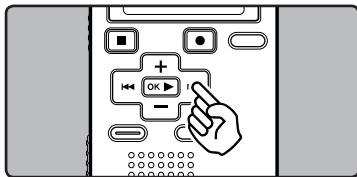
- [▶] will appear on the display.
- If you release the ▶▶I button, it will stop. Press the **OK ▶** button to start playback from where it was stopped.

While the recorder is during playback mode, press and hold the ▶▶I button.

- When you release the ▶▶I button the recorder will resume normal playback.
- If there is an index mark or temp mark in the middle of the file, the recorder will stop at that location (☞ P. 31).
- The recorder stops when it reaches the end of the file. Continue pressing the ▶▶I button to proceed with the cue from the beginning of the next file.

Rewinding

While the recorder is during stop mode in the file display, press and hold the I◀◀ button.
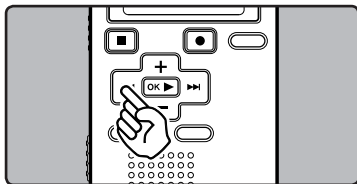
- [◀] will appear on the display.
- If you release the I◀◀ button, it will stop. Press the **OK ▶** button to start playback from where it was stopped.

While the recorder is during playback mode, press and hold the I◀◀ button.

- When you release the I◀◀ button the recorder will resume normal playback
- If there is an index mark or temp mark in the middle of the file, the recorder will stop at that location (☞ P. 31).
- The recorder stops when it reaches the beginning of the file. Continue pressing the I◀◀ button to proceed with the review from the end of the previous file.

Locating the beginning of the file
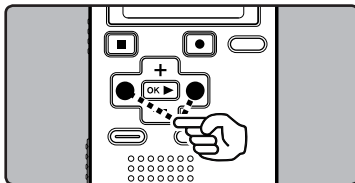
While the recorder is during stop mode or playback mode, press the ▶▶I button.

- The recorder skips to the beginning of the next file.

While the recorder is during playback mode, press the I◀◀ button.

- The recorder skips to the beginning of the current file.

While the recorder is during stop mode, press the I◀◀ button.

- The recorder skips to the beginning of the previous file. If the recorder stop the midway of the file, return to the beginning of the file.

3

Playback

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While the recorder is during playback mode, press the ◄◄ button twice.

• The recorder skips to the beginning of the previous file.

Notes

• When you skip to the beginning of the file during playback, the recorder will stop at the position of the index mark and temp mark. The index mark and temp mark will be skipped when you perform the operation in stop mode (☞ P. 31).
• When [**Skip Space**] set to other than [**File Skip**], the recorder will skip forward/reverse the specified time, then will start playback (☞ P. 36, P. 43).

Playback through earphone

An earphone can be connected to the **EAR** jack of the recorder for listening.

To **EAR** jack
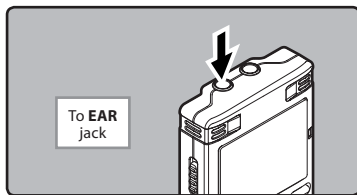
• When the earphone is used, the recorder speaker will be switched-off.

Notes

• To avoid irritation to the ear, insert the earphone after turning down the volume level.
• When you listen with the earphone during playback, do not raise the volume too much. It may cause hearing impairment and decrease in hearing ability.

Settings relating to playback

⚠ For WS-500M:

Segment repeat (☞ P.32)	This function enables repeated playback of part of the file being played.
[Replace] (☞ P.45)	This changes the order of the files in the selected folder. It is useful for playing back files in a preferred order while in normal playback mode etc.
[Noise Cancel]* (☞ P.36, P.40)	If recorded audio is difficult to understand because of noisy surroundings, adjust the Noise Cancel setting level.
[Voice Filter]* (☞ P.36, P.40)	The recorder has a Voice Filter Function to cut low and high frequency tones during normal, fast, or slow playback, and enable clear audio playback.
[WOW]** (☞ P.36, P.40)	The recorder has WOW XT, an audio processing technology that increases sound clarity and bass quality.
[Equalizer]** (☞ P.36, P.41)	If you change the equalizer setting, you can enjoy the music with your favorite sound quality.
[Play Mode]*** (☞ P.36, P.41)	You can select the playback mode that fits your preference.
[Play Speed] (☞ P.36, P.42)	The playback speed can be set to slow speed or fast speed playback.
[Skip Space] (☞ P.36, P.43)	The skip interval length can be set.

* Can be operated only in [**VOICE**] mode.
** Can be operated only in [**MUSIC**] mode.
*** The operation is different between [**VOICE**] mode and [**MUSIC**] mode.

3

Playback

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For WS-400S:

Segment repeat (☞ P.32)	This function enables repeated playback of part of the file being played.
[Replace] (☞ P.45)	This changes the order of the files in the selected folder. It is useful for playing back files in a preferred order while in normal playback mode etc.
[Voice Filter] (☞ P.36, P.40)	The recorder has a Voice Filter Function to cut low and high frequency tones during normal, fast, or slow playback, and enable clear audio playback.
[Play Mode] (☞ P.36, P. 41)	You can select the playback mode that fits your preference.
[Play Speed] (☞ P.36, P.42)	The playback speed can be set to slow speed or fast speed playback.
[Skip Space] (☞ P.36, P.43)	The skip interval length can be set.

About music file

In cases where the recorder is unable to playback music files that have been transferred to it, check to make sure that the sampling rate and bit rate are in the range where playback is possible. Combinations of sampling rates and bit rates for music files which the recorder can playback are given below.

File format	Sampling frequency	Bit rate
WAV* format	44.1 kHz	16 bit
MP3* format	**MPEG1 Layer3:** 32 kHz, 44.1 kHz, 48 kHz **MPEG2 Layer3:** 16 kHz, 22.05 kHz, 24 kHz	From 8 kbps up to 320 kbps
WMA format	8 kHz, 11 kHz, 16 kHz, 22 kHz, 32 kHz, 44.1 kHz, 48 kHz	From 5 kbps up to 320 kbps

* For WS-500M only.
• Variable bitrate MP3 files (in which conversion bitrates can vary) may not play properly.
• For WAV files, this recorder can only play back those in the linear PCM format. WAV files other than these cannot be played back.
• This recorder is compatible with Microsoft Corporation DRM9, but not with DRM10.

3

Playback

Setting an index mark or a temp mark

If index marks and temp marks are placed, you can quickly find a location you want to listen to in fast forward and fast rewind and when cuing a file. Index marks cannot be placed on files created on machines other than Olympus IC recorders, but temp marks can be placed instead to temporarily remember desired locations.

- +− button
- ▶▶|◀◀ button
- OK▶ button
- INDEX/ERASE button
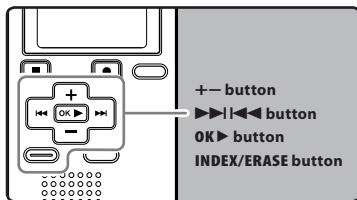
1 While the recorder is during recording mode or playback mode, press the INDEX/ERASE button.

- Even after an index or temp mark is placed, recording or playback will continue so you can place index or temp marks in other locations in a similar manner.
- A number appears on the display and an index mark or temp mark will be placed.
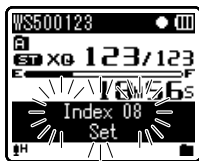
Clearing an index mark or a temp mark:

1 Locate the index or temp mark you want to clear.

2 Press the ▶▶| or |◀◀ button to select the index or temp mark to erase.
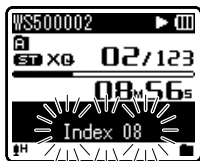
3 While the index or temp number appears for approximately 2 seconds on the display, Press the INDEX/ERASE button.

- The index or temp mark is erased.
- Index or temp numbers after the erased index or temp number will automatically move up.

Notes

- Temp marks are temporary markings, so if you move to another file, switch to the list screen, or connect the recorder to a computer, they will be automatically erased.

- Up to 16 index and temp marks can be set in a file. If you try to place more than 16 index or temp marks, the [**Index Full**] message will appear for index marks, and [**Temp Mark Full**] for temp marks.
- Index or temp marks cannot be set or erased in a locked file (☞ P.36, P.38).

How to begin segment repeat playback

This function enables repeated playback of part of the file being played.

+— button
▶▶┃◀◀ button
OK▶ button
REC● button
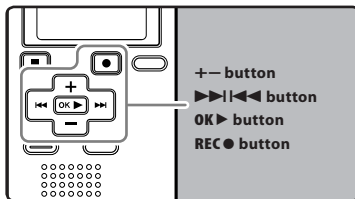
1. **Select a file that has a segment you would like to play back repeatedly (☞ P.18 to P.20).**

2. **In the File list display, press the + or — button to select the file.**
   - In the File display, press the ▶▶┃ or ┃◀◀ button to select a file.

3. **Press the OK▶ button to start playback.**

4. **Press the REC● button at the point you want to start segment repeat playback.**
   - [**A**] will flash on the display.

WS500002 ▶ ▥
🔒
ST XQ   02/123
        08ᴍ56ꜱ
        22ᴍ41ꜱ
🔊A◀▶

   - Fast forwarding and rewinding can be conducted when [**A**] is flashing in the same manner as during normal playback, and you can quickly proceed as far as the end position (☞ P.28).

- When it reaches to the end of the file while [🔒] is flashing, the point will become the end position, and repeat playback will start.

5 Press the REC● button again at the position where you want to end segment repeat playback.

- The recorder repeatedly plays back the segment until the segment repeat playback is cancelled.

![WS500002 display showing 02/123, 13ᴹ07ˢ, 22ᴴ41ˢ, A▶B repeat]
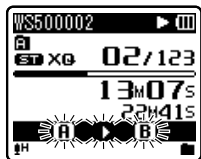
Note

- As in normal playback mode, playback speed can be changed during segment repeat playback as well (☞ P.36, P.42). If an index mark and temp mark are inserted or eliminated during segment repeat playback, segment repeat playback will be canceled and it will return to normal playback mode (☞ P.31).

Cancel the segment repeat playback function

Pressing any of the following buttons will release the segment repeat playback.
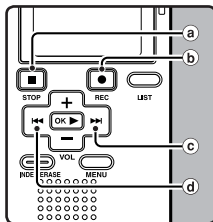
ⓐ **Press the STOP ■ button**
Pressing the **STOP ■** button will release segment repeat playback, and stop playback.

ⓑ **Press the REC● button**
Pressing the **REC●** button will release segment repeat playback, and playback continues without repeating.

ⓒ **Press the ►►I button**
Pressing the **►►I** button will release segment repeat playback, and fast forward and cue to the beginning of the next file.

ⓓ **Press the I◄◄ button**
Pressing the **I◄◄** button will release segment repeat playback, and reverse to the beginning of the current file.

3

Playback

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Erasing

A selected file can be erased from a folder. Also, all files in a folder can be erased simultaneously.

+− button
▶▶│◀◀ button
OK ▶ button
INDEX/ERASE button
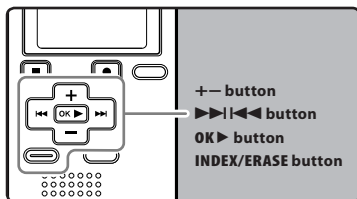
1 Select the folder or file you want to erase (☞ P.18 to P.20).

2 In the File list display, press the + or − button to select the file you want to erase.

• In the File display, press the ▶▶│ or │◀◀ button to select a file.

3 While the recorder is during stop mode, press the INDEX/ERASE button.

4 Press the + button to select [Erase in Folder] or [File Erase].

5 Press the OK ▶ button.

6 Press the + button to select [Start].

7 Press the OK ▶ button.

• The display changes to [Erase!] and erasing will start.
• [Erase Done] is displayed when the file is erased. File numbers will be reassigned automatically.
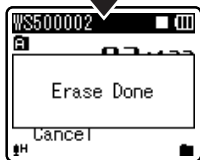
Notes

• The locked files and files set as read-only cannot be erased (☞ P.36, P.38).
• If an action is not selected within 8 seconds, the recorder will return to stop status.

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- It may take over 10 seconds to complete processing. Never remove batteries during this time because data may be corrupted. In addition, replace the batteries with new ones in order to ensure that the batteries will not run out while processing.

- **For WS-500M only:**
  You can delete other than [**Music**] folders when the recorder is set to [**MUSIC**] mode. However, you cannot delete any folders when the recorder is set to [**VOICE**] mode.

- **For WS-400S only:**
  You cannot delete folders through the recorder.

3

Erasing

Menu Setting

Menu setting method

Items in menus are categorized by tabs, so select a tab first and move to a desired item to quickly set it. You can set each menu item as follows.
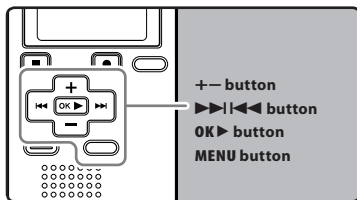
+– button
▶▶|◀◀ button
OK ▶ button
MENU button

1 While the recorder is during stop mode, press the MENU button.

- The menu will appear on the display.

File Menu
▣ Erase Lock
♪ Replace
▶ Property

- Menu items can be set during a recording or playback (☞ P.37).

2 Press the + or – button to move to the tab that contains the item you want to set (☞ P.38 to P.44).

- You can change the menu display by moving the settings tab cursor.

LCD/Sound Menu
▣ Backlight
♪ Contrast
▶ LED
▣ Beep
▣ Language(Lang)

3 Press the OK ▶ or ▶▶| button to move the cursor to the item to set.

LCD/Sound Menu
▣ Backlight
♪ Contrast
▶ LED
▣ Beep
▣ Language(Lang)

4 Press the + or – button to move to the item you want to set.

LCD/Sound Menu
▣ Backlight
♪ Contrast
▶ LED
▣ Beep
▣ Language(Lang)

5 Press the OK ▶ or ▶▶| button.

- Moves to the setting of the selected item.

6 Press the + or – button to change the setting (☞ P.38 to P.44).

LED
On
Off
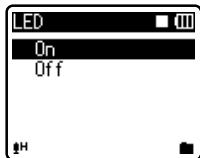
7 **Press the OK ▶ button to complete the setting.**

- You will be informed that the settings have been established via the screen.
- Pressing the ◀◀ button without pressing the **OK ▶** button will cancel the settings and return you to the previous screen.

8 **Press the MENU button to close the menu screen.**

- When in the menu screen during recording or playback, pressing the ◀◀ or **MENU** button will allow you to return to the playback screen without interrupting recording or playback.

Notes

- The recorder will stop if you leave it idle for 3 minutes during a menu setup operation, when a selected item is not applied.
- When entering menu settings during recording or playback, the menu settings will be cancelled if 8 seconds elapse with no buttons being pressed.

▌ **Setting menu during recording:**

Function	Setting
Mic Sense	
Low Cut Filter	
VCVA	To menu item options
Backlight	
LED	

▌ **Setting menu during playback:**

Function	Setting
Property	
Noise Cancel*	
Voice Filter**	
WOW***	
Equalizer***	To menu item options
Play Mode	
Play Speed	
Skip Space	
Backlight	
LED	

* For WS-500M only (Set to [**VOICE**] mode).
** For WS-400S.
For WS-500M (Set to [**VOICE**] mode).
*** For WS-500M only (Set to [**MUSIC**] mode).

4

Menu setting method

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◫ File Menu

Erase Lock

Locking a file keeps important data from being accidentally erased. Locked files are not erased when you select to erase all files from a folder (☞ P.34).

[**On**]:
Locks the file and prevents it from being erased.

[**Off**]:
Disables this function. Unlocks the file and allows it to be erased.

Replace

Refer to "**Rearranging files [Replace]**" (☞ P.45).

Property

File and folder information can be confirmed from the menu screen.

When the file is selected:

[**Name**] (File name), [**Date**] (Time stamp), [**Size**] (File size), [**Bit Rate**]* (File format) [**Artist**]** (Artist name) and [**Album**]** (Album name) will appear on the display.

* When a linear PCM format file has been selected, [**Bit Rate**] area displays the sampling frequency and bit rate.
** When a file contains no tag information, the display contents of this area are blank. When [**VOICE**] is selected, [**Artist**] and [**Album**] will not appear on the display.

When the folder is selected:

[**Name**] (File name), [**Folder**]* (Number of folder) and [**File**]** (Number of file) will appear on the display.

* When [**VOICE**] is selected, [**Folder**] will not appear on the display.
** Files which cannot be recognized by this recorder are not included in the number of files.

• Select the files for which you would like to confirm information in advance before operating the menu.

♨ Rec Menu

⚠ For WS-500M:

• When performing operations on the [**Rec Menu**] screen, set the mode switch to [**VOICE**] (☞ P.17).

Mic Sense

Microphone sensitivity is adjustable to meet recording needs.

⚠ For WS-400S:

• Use the switch to set the microphone sensitivity (☞ P.23).

[**Conference**]:
This is a highly sensitive mode which can record surrounding noises.

[**Dictation**]:
This is the standard level of microphone sensitivity. Select this mode for cases where the volume of the source sound is high, such as a band performance.

• When you would like to clearly record a speaker's voice, set [**Mic Sense**] to [**Dictation**] and hold recorder's built-in stereo microphone close to the speaker's mouth (5-10 cm) before recording.

Rec Mode

In addition to selecting between stereo or mono recording formats, you can also record favoring high sound quality, or record favoring increased recording time. Select the recording mode that fits your purpose.

[**ST XQ**]:
Stereo extra high quality sound recording.

[**ST HQ**]:

Stereo high quality sound recording.

[**ST SP**]:

Stereo standard recording.

[**HQ**]:

Monaural high quality sound recording.

[**SP**]:

Monaural standard recording.

[**LP**]:

Monaural long-term recording.

- To record a meeting and lecture clearly, set other than [**LP**] in [**Rec Mode**].
- When the external monaural microphone is used while [**Rec Mode**] is set to a stereo recording mode, it enables recording only with the L channel microphone.

Low Cut Filter

The recorder has a Low Cut Filter function to minimize low-frequency sounds and record voices more clearly. This function can reduce noise from air conditioners, projectors and other similar noises.

[**On**]:

Enables the Low Cut Filter function.

[**Off**]:

Disables this function.

VCVA

When the microphone senses that sounds have reached a preset threshold volume level, the built-in Variable Control Voice Actuator (VCVA) starts recording automatically, and stops when the volume drops below the threshold level. The VCVA feature extends recording time and conserves memory by stopping recording during silent periods, which helps the playback to be more efficient.

[**On**]:

Enables the VCVA function. Will start recording in VCVA mode.

[**Off**]:

Disables the VCVA function. Will resume recording in normal mode.

Adjust the start/stop actuation level:

1 Press the REC● button to start recording.

- When the sound volume is lower than the preset threshold sound level, recording automatically stops after 1 sec approximately, and [**Standby**] flashes on the display. The recording indicator light glows when recording starts and flashes when recording pauses.

2 Press the ►►I or I◄◄ button adjust the start/stop actuation level.

- The VCVA level can be set to any of 15 different values.
- The higher the value, the more sensitive the recorder to sounds. At the highest value, even the faintest sound will activate recording.
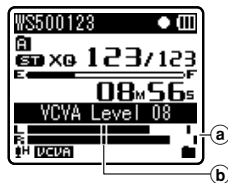
ⓐ Level meter (varies according to the sound volume being recorded)
ⓑ Start level (moves to the right/left according to the set level)

- The start/stop actuation level also varies depending on the selected microphone sensitivity mode (☞ P.23 or P.38).
- If the starting level is not adjusted within 2 seconds, the display will return to the previous.
- If the surrounding noise is loud, the starting sensitivity of the VCVA can be adjusted according to the recording situation.

4

Menu setting method

• To ensure successful recordings, prior testing and adjustment of the start/stop actuation level is recommended.

▶ Play Menu

🔊 For WS-500M:

• When operating the [**Play Menu**] screen, different settings items are displayed depending on the position of the mode switch.

When [**VOICE**] mode is selected:

[Noise Cancel]

[Voice Filter]

[Play Mode] (☞ P.41)

[Play Speed] (☞ P.42)

[Skip Space] (☞ P.43)

When [**MUSIC**] mode is selected:

[WOW]

[Equalizer] (☞ P.41)

[Play Mode] (☞ P.41)

[Play Speed] (☞ P.42)

[Skip Space] (☞ P.43)

🔊 For WS-400S:

[Voice Filter]

[Play Mode] (☞ P.41)

[Play Speed] (☞ P.42)

[Skip Space] (☞ P.43)

Noise Cancel

If recorded audio is difficult to understand because of noisy surroundings, adjust the Noise Cancel setting level.

[**High**] [**Low**]:

Enables the Noise Cancel function. Noise will be reduced in the file when it's played back for better sound quality.

[**Off**]:

Disables this function.

• When [**Noise Cancel**] is set to [**Low**] or [**High**], [**Voice Filter**] and slow/high speed playback functions will not function. To use these functions, set [**Noise Cancel**] to [**Off**].

Voice Filter

The recorder has a Voice Filter Function to cut low and high frequency tones during normal, fast, or slow playback, and enable clear audio playback.

[**On**]:

Enables the Voice Filter function.

[**Off**]:

Disables this function.

• When [**Voice Filter**] is set to [**On**], [**Noise Cancel**] will not function. To use this functions, set [**Voice Filter**] to [**Off**].

WOW

The recorder has WOW XT, an audio processing technology that increases sound clarity and bass quality.

The level of the surround effect (SRS 3D) and the bass effect (TruBass) may be individually adjusted through 4 levels of processing.

1 Select [SRS 3D] or [TruBass].

[**SRS 3D**]:

The surround effect can be adjusted. The expansive feel and clarity of the sound can be increased.

[**TruBass**]:

The low-frequency range can be adjusted. The low-frequency range can be made richer.

2 Adjust the surround level or bass effect level.

[**High**] [**Middle**] [**Low**]:
The sound quality can be adjusted to one of 3 levels.

[**Off**]:
Disables this function.

- The WOW XT effect will be weakened if the bit rate for any music file is less than 32 kbps.
- Depending on the song, the WOW XT effect will be heightened, and may sound like noise. If this happens, adjust the WOW XT effect.
- Set [**WOW**] to [**Off**] to use the slow playback or fast playback mode. Otherwise you cannot use these functions (☞ P.42).

Equalizer

If you change the equalizer setting, you can enjoy the music with your favorite sound quality.

1 Select the desired equalizer characteristics.

[**Off**]:
Disables the equalizer function.

[**Rock**] [**Pop**] [**Jazz**]:
Enables the equalizer function.

[**User**]:
Select [**User**] to save your own custom equalizer settings. If [**User**] is selected, proceed to Step 2.

2 Select the frequency band.

[**60 Hz**] [**250 Hz**] [**1 kHz**] [**4 kHz**] [**12 kHz**]:
Select the frequency bandwidth setting.

3 Select the equalizer level.

- You can select the equalizer level from [**−6**] to [**+6**] in 1dB increments.
- The higher the decibel value, the louder the sound.

- To change the settings again, press the ▶▶ or ◀◀ button and repeat the procedure from step 2.

Play Mode

You can select the playback mode that fits your preference.

For WS-500M:

Set to [**MUSIC**] mode.

Select the desired playback range:

1 Select [Play Area].

2 Select [File], [Folder] or [All].

[**File**]:
Selects the current file.

[**Folder**]:
Selects the current folder.

[**All**]:
Selects all files in the internal memory.

Select the desired playback mode:

1 Select [Repeat] or [Random].

[**Repeat**]:
Sets to repeat playback mode.

[**Random**]:
Sets to random playback mode.

2 Select [On] or [Off].

[**On**]:
Sets the playback range to be played back repeatedly or randomly.

[**Off**]:
Disables this function.

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Menu setting method

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For WS-500M:
Set to [**VOICE**] mode.

For WS-400S:

[**File**]:
Stop after playing back the current file.
[**Folder**]:
Play files continuously in the current folder until the last file and stop.

- In [**File**] mode, when the recorder comes to the end of the last file in the folder, [**End**] flashes for two seconds on the display and the recorder stops at the start of the last file.
- In [**Folder**] mode, when the recorder comes to the end of the last file in the folder, [**End**] flashes for two seconds on the display and the recorder stops at the start of the first file in the folder.
- In [**All**] mode, after playing the last file in the folder, the recorder will start playing from the first file in the next folder. When it comes to the end of the last file in the recorder, [**End**] flashes for two seconds on the display and the recorder stops at the start of the first file in the recorder.

Play Speed

The playback speed of the file can be changed between 0.5 and 2 times speed. Change the speed according to need such as listening to meeting content at a fast speed or reviewing spots that you couldn't catch in a language lesson at a slow speed. The tone will be automatically adjusted digitally without changing the voice so it sounds natural.

1 **Select [Slow Playback] or [Fast Playback].**

2 **Set the playback speed.**

When [Slow Playback] is selected:
[**x0.5 Play**] [**x0.625 Play**] [**x0.75 Play**] [**x0.875 Play**]
When [Fast Playback] is selected:
[**x1.125 Play**] [**x1.25 Play**] [**x1.375 Play**] [**x1.5 Play**] [**x2.0 Play**]

Change Playback Speed:

1 **Press the OK ▶ button to start playback.**

2 **Press the OK ▶ button to switch playback speed.**

- Every time the **OK ▶** button is pressed, the playback speed will switch.
- Even if playback is stopped, the changed playback speed will be retained. The next playback will be at that speed.

Normal playback: Playback at normal speed.
Slow playback: Playback speed slows down, and [▶₅] will appear on the display (default at 0.75 times as fast).
Fast playback: Playback speed becomes faster, and [▶₆] will appear on the display (default at 1.5 times as fast).

Restrictions on double speed playback:
Double speed fast playback may not be available depending on the sampling frequency and the bit rate of the file to be played back. In such a case, the device plays back in up to x1.5 speed.

- As in normal playback mode, you can stop playback, cue a file, or insert an index mark in slow playback and fast playback modes as well (☞ P.31).

- The slow playback or fast playback is available even if either [**Voice Filter**] or [**Equalizer**] is set (☞ P.40, P.41).
- The slow playback or fast playback is not available if either [**Noise Cancel**] or [**WOW**] effect is set (☞ P.40).
- Playback speed will return to normal if the mode switch setting is changed.

Skip Space

This function enables you to skip (forward) or reverse skip (rewind) a file being played for a set period. This function is convenient for quickly skipping to another playback position or repeatedly playing back short phrases.

1 Select [**Forward Skip**] or [**Reverse Skip**].

2 Set the skip space.

When [Forward Skip] is selected:
　[**File Skip**] [**10sec. Skip**] [**30sec. Skip**]
　[**1min. Skip**] [**5min. Skip**]
　[**10min. Skip**]
When [Reverse Skip] is selected:
　[**File Skip**] [**1sec. Skip**] – [**5sec. Skip**]
　[**10sec. Skip**] [**30sec. Skip**]
　[**1min. Skip**] [**5min. Skip**]
　[**10min. Skip**]

Forward/Reverse Skip Playback:

1 Press the OK ► button to start playback.

2 Press the ►►I or I◄◄ button.

- The recorder will skip (forward) or reverse skip (rewind) a set space and start playing back.
- If there is an index mark/temp mark or a cue closer than the skip space, the recorder will forward skip/reverse skip to that position.

▣ LCD/Sound Menu

Backlight

The display will remain lit for about 10 (Initial setting) seconds when a button on the recorder is pressed.

1 Select [**Lighting Time**] or [**Brightness**].

2 Set the lighting time.

[**Off**]:
　Disables this function.
[**5seconds**] [**10seconds**] [**30seconds**]
[**1minutes**]:
　Enables the Backlight function.

3 Set the brightness.

[**High**] [**Low**]:
　Sets the brightness of the backlight when lit.

Contrast

Display contrast can be adjusted in 12 levels. You can adjust the LCD display contrast level from [**01**] to [**12**].

LED

You can set it so the LED indicator light does not turn on.
[**On**]:
　LED light will be set.
[**Off**]:
　Disables this function. LED light will be cancelled.

Beep

The recorder beeps to alert you to button operations or warn you of errors. System sounds may be turned off.
[**On**]:
　Enables the Beep function.
[**Off**]:
　Disables this function.

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Menu setting method

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Language(Lang)

You can select the display language for this recorder.

[**English**] [**Français**] [**Español**]:

🔧 Device Menu

Time & Date

Refer to "**Setting time and date [Time & Date]**" (☞ P.15).

Reset Settings

This returns the functions back to their initial settings (factory default).

[**Start**]:
Returns the settings to their initial values.
[**Cancel**]:
Takes you back to the [**Device Menu**].

• After resetting the settings, the time settings and file numbers will be preserved from before the reset and will not return to their initial settings.

Menu settings after setting reset (initial settings):

🎙 Rec Menu:

[**Mic Sense**]	[**Conference**]
[**Rec Mode**]	[**ST XQ**]
[**Low Cut Filter**]	[**Off**]
[**VCVA**]	[**Off**]

▶ Play Menu:

[**Noise Cancel**]*	[**Off**]
[**Voice Filter**]**	[**Off**]
[**WOW**]***	
[**SRS 3D**]	[**Off**]
[**TruBass**]	[**Off**]
[**Equalizer**]***	[**Off**]
[**Play Mode**]***	
[**Play Area**]	[**Folder**]
[**Repeat**]	[**Off**]
[**Random**]	[**Off**]
[**Play Mode**]**	[**File**]
[**Play Speed**]	
[**Slow Playback**]	[**x0.75 Play**]
[**Fast Playback**]	[**x1.5 Play**]
[**Skip Space**]	[**File Skip**]

🔲 LCD/Sound Menu:

[**Backlight**]	
[**Lighting Time**]	[**10seconds**]
[**Brightness**]	[**Low**]
[**Contrast**]	[**Level 06**]
[**LED**]	[**On**]
[**Beep**]	[**On**]
[**Language(Lang)**]	[**English**]

* For WS-500M only (Set to [**VOICE**] mode).
** For WS-400S.
  For WS-500M (Set to [**VOICE**] mode).
*** For WS-500M only (Set to [**MUSIC**] mode).

Format

Refer to "**Formatting the Recorder [Format]**" (☞ P.46).

System Info.

You can check the recorder's information on the menu screen. [**Model**] (Model Name), [**Capacity**] (Built-in frash memory size) and [**Version**] (System version) [**Serial No.**] (Serial Number) appears on the display.

Rearranging files [Replace]

You can move a file in a folder to change the order of playback. First select the folder (file) for which you want to change the playback order.

> +− button
> ▶▶I I◀◀ button
> OK ▶ button
> MENU button
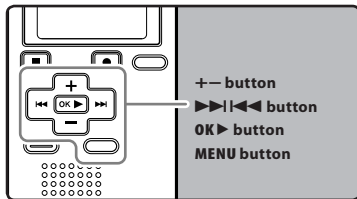
1 Select the folder for which you would like to rearrange the song order (☞ P.18 to P.20).

2 While the recorder is during stop mode, press the MENU button.

- The menu will appear on the display (☞ P.36).

3 Press the OK ▶ or ▶▶I button to move the cursor to the item to set.

4 Press the + or − button to select [Replace].

5 Press the OK ▶ or ▶▶I button.

6 Press the + or − button to select the file you want to move.

7 Press the OK ▶ button.

- The cursor will flash to confirm that the file can be moved.
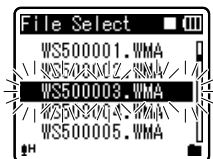
8 Press the + or − button to select the location to move it to.
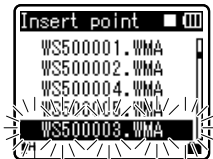
9 Press the OK ▶ button button to complete the setting.

- If there are more files to move, repeat Steps 5 through 8.
- Pressing the I◀◀ button without pressing the OK ▶ button will cancel the settings and return you to the previous screen.
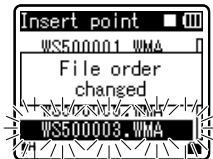
10 Press the MENU button to close the menu screen.

4

Menu setting method

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Formatting the Recorder [Format]

If you format the recorder, all files will be removed and all function settings will return to defaults except date and time settings. Transfer any important files to a computer before formatting the recorder.

+− button
►►I I◄◄ button
OK ► button
MENU button

4
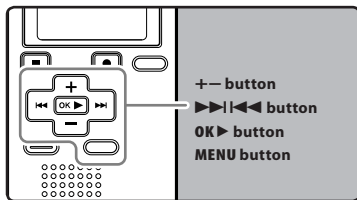
Menu setting method

1 **While the recorder is during stop mode, press the MENU button.**
   • The menu will appear on the display (☞ P.36).

2 **Press the + or − button to select [Device Menu] tab.**
   • You can change the menu display by moving the settings tab cursor.

3 **Press the OK ► or ►►I button.**

4 **Press the + or − button to select [Format].**

> Device Menu ■ ▥
> 🗉 Time & Date
> 🛢 Reset Settings
> ► Format
> 🖵 System info.

5 **Press the OK ► or ►►I button.**
   • [**Format**] will appear on the display.

6 **Press the + button to select [Start].**

> Format ■ ▥
> Start
> Cancel

7 **Press the OK ► button.**
   • After the [**Data will be cleared**] message is on for two seconds, [**Cancel**] will turn on.

> Format ■ ▥
> ⚠
> Data will be cleared

> Format ■ ▥
> Are You Sure?
> Start
> Cancel
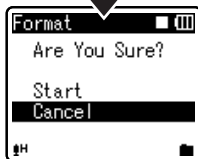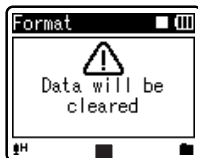
8 **Press the + button again to select [Start].**

> Format ■ ▥
> Are You Sure?
> Start
> Cancel

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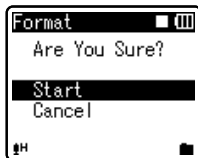
9 Press the OK ▶ button.

- Formatting begins and [**Format !**] flashes on the display.
- [**Format Done**] appears when formatting ends.
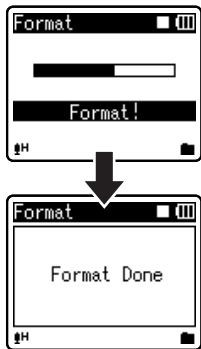
Notes

- It may take over 10 seconds to complete processing. Never remove batteries during this time because data may be corrupted. In addition, replace the batteries with new ones in order to ensure that the batteries will not run out while processing.
- Never format the recorder from a PC.
- Once the recorder is formatted, the music files with DRM may not be transferred to the recorder again.
- When the recorder is formatted, all the saved data, including locked files and read-only files, are erased.
- After formatting, recorded audio file names may start from [**0001**].
- When returning the settings for the functions to their initial settings, use [**Reset Settings**] (☞ P.36, P.44).

Using the Recorder on Your PC

By being connected to a PC, the recorder enables you to do the following:

- You can transfer files recorded with this recorder to a computer, play them back, and manage them by using Windows Media Player or iTunes (☞ P.53, P.60).
- The recorder is compatible with WMA, MP3***** and WAV***** language content.
  * For WS-500M only.
- In addition to its uses as an IC recorder and a music player, this recorder can also be used as external memory for a computer by storing data from a computer and reading it back out (☞ P.52, P.64).

Operating environment

Windows

Operating System:
Microsoft Windows 2000/XP/Vista (Standard Installation)

Compatible PC's:
Windows PC's equipped with more than one free USB port

Macintosh

Operating System:
Mac OS X 10.2.8 - 10.5 (Standard Installation)

Compatible PC's:
Apple Macintosh series equipped with more than one free USB port

Notes

- This is an operational environment for saving the files recorded by this recorder to your PC with USB connection.
- Even if operational environment is satisfied, we do not support such as upgraded OS, the multi-boot environment and self-modified PC's.

5

Operating environment

Operating environment

Precautions on using the recorder connected to a PC

- When you are downloading a file from the recorder or uploading a file to the recorder, do not remove the USB cable even if the screen is indicating you can. Data is still being transferred while the recording indicator light is blinking. When removing the USB cable, be sure to follow the description in ☞ P.51. If the USB cable is removed before the drive is stopped, data may not be successfully transferred.
- On a PC, do not format the drive of the recorder. Initialization is not successfully achieved on a PC. For initialization, follow the instructions in the [**Format**] screen of the recorder (☞ P.46).
- Folder (directory) names appeared by file management tools such as Explorer attached to Microsoft Windows is different from the folder names that can be set with the recorder.
- If folders or files stored on the recorder are moved or renamed by using a file management tool such as Explorer, the order of files may be changed or files may become unrecognizable
- Data can be written or uploaded to the recorder even though the attribute of the recorder drive is shown as Read-only by the operating system of the PC.
- As the noise may cause adverse effects on electronics devices nearby the recorder, unplug the external microphone and earphone when you connect the recorder to a PC.

Copyright and copyright protection feature (DRM)

By the Copyright Act, any voice/music files and music CDs downloaded from the Internet without the copyright holder's permission may not be reproduced, distributed, publicized/re-publicized on the Internet, or converted into WMA or MP3 files for the purpose of commercial business or sale.

A WMA file may be provided with DRM (Digital Right Management) for copyright protection. DRM limits the file to copy or distribute music files that are converted (ripped) from a music CD or downloaded from music distribution services. To transfer a WMA file with DRM to the recorder, you need to use appropriate methods such as Windows Media Player. Copying the music files with DRM purchased from online music distribution service to a portable device such as this recorder may be restricted.

Note

- This recorder is compatible with Microsoft Corporation DRM9, but not with DRM10.

Connecting to your PC

1 Boot the PC.

2 Slide the USB connector slide lever in the direction indicated by the arrow to eject the USB connector out of the recorder.
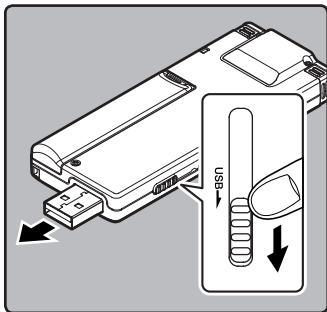
3 Connect to the PC's USB port or to a USB hub.
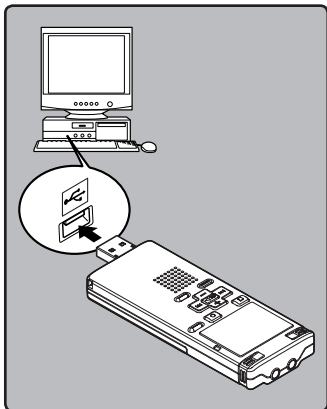
Windows:
When you open [**My Computer**], it will be recognized by the drive name of the product name.
Macintosh:
When you connect the recorder to a Mac OS, it will be recognized by the drive name of the product name on the desktop.
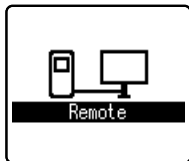
• [**Remote**] is appeared on recorder if the USB cable is connected.

Notes

• Refer to the user's manual for your PC regarding the USB port on your PC.
• Be sure to push the cable connector all the way in. Otherwise, the recorder may not operate properly.
• Use the supplied USB extension cable depending on situations.
• Do not use USB extension cables other than the supplied cable.
Using cables from other manufacturers could result in damage to the recorder. Do not use the supplied USB extension cable with devices from other manufacturers.

Disconnecting from your PC

Windows

Safely remove USB Mass Storage Device - Drives(Q:, S:)
5:17 PM

1 Click [ ] on the task bar located at the lower-right corner of the screen. Click [Safely remove USB Mass Storage Device].

- The drive letter will differ depending on the PC being used.

2 When the safe to remove hardware window appears, click [OK].

3 Disconnect the recorder from the PC.

Macintosh

1 Move the drive icon for this recorder that is appear on the desktop to the garbage bin by Drag & Drop it.

- When you connect the recorder to a Mac OS, it will be recognized by the drive name of the product name on the desktop.

2 Disconnect the recorder from the PC.

Note

- NEVER disconnect the USB while the recording indicator light is flashing. If you do, the data will be destroyed.

5

Connecting to your PC

51

Transfer the voice files to your PC

The 5 voice folders of this recorder are appeared as [**DSS_FLDA**], [**DSS_FLDB**], [**DSS_FLDC**], [**DSS_FLDD**] and [**DSS_FLDE**], and the recorded voice files are saved in these folders.

Windows

1 **Connecting the recorder to your PC (☞ P.50).**

2 **Open the Explorer window.**

3 **Open the product name folder.**

- When you open [**My Computer**], it will be recognized by the drive name of the product name.

4 **Copy the data.**

5 **Disconnect the recorder from the PC (☞ P.51).**

Macintosh

1 **Connecting the recorder to your PC (☞ P.50).**

- When you connect the recorder to a Mac OS, it will be recognized by the drive name of the product name on the desktop.

2 **Double-click the product name icon on the desktop.**

3 **Copy the data.**

4 **Disconnect the recorder from the PC (☞ P.51).**

Notes

- While transmitting data, [**Busy**] is appeared, and the recording indicator light flashes. NEVER disconnect the USB while the recording indicator light is flashing. If you do, the data will be destroyed.
- In the Mac OS operational environment, WMA format files cannot be played back.

Using Windows Media Player

Music files that have been imported to your computer from music CDs and acquired over the Internet can be transferred to and played back with this recorder. It supports WAV, MP3, and WMA format music files.

By using Windows Media Player, music files from music CDs can be converted (ripped) (☞ P.54) and music files that you have bought from any music distribution sites can be easily transferred to the recorder (☞ P.55, P.58).

Window names

Windows Media Player 11

Windows Media Player 10

1. **Features taskbar**
2. **Seek slider**
3. **Shuffle button**
4. **Repeat button**
5. **Stop button**
6. **Previous button**
7. **Play button**
8. **Next button**
9. **Mute button**
10. **Volume slider**
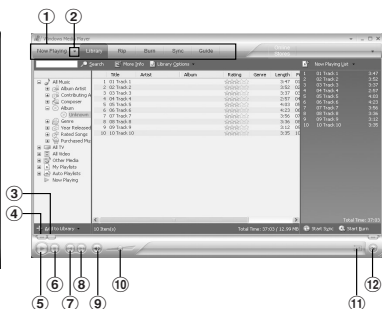
1. **Features taskbar**
2. **Quick Access Panel button**
3. **Seek slider**
4. **Rewind button**
5. **Play button**
6. **Stop button**
7. **Previous button**
8. **Next button**
9. **Mute button**
10. **Volume slide**
11. **Shuffle/ Repeat button**
12. **Fast Forward button**

Note

• If you are using Windows 2000, Windows Media Player must be installed on the PC.

Copying music from CD

1 Insert CD into the CD-ROM drive, and start Windows Media Player.

2 From the Features taskbar, click [Rip] menu.

- After clicking [**Rip**] menu, click [**View Album Info**] for Windows Media Player 10 as necessary.
- If Internet connectivity is available, CD information is searched.

3 Put a check mark on the music file that you want to copy.

4 Click [Start Rip].

- For Windows Media Player 10 Click [**Rip Music**].
- Files copied to a PC are stored in WMA format. Music files copied are categorized by artist, album, genre, etc. and added to the play list.

Windows Media Player 11
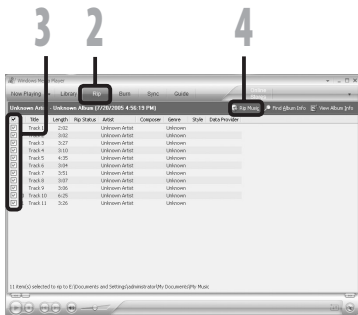
Windows Media Player 10

Transferring music file to the recorder

You can transfer the music files saved in your PC to this recorder. For how to copy the music files from the CD to your PC, see "**Copying music from CD**" (☞ P.54).

Windows Media Player 11

1 **Connect the recorder to a PC, and start Windows Media Player.**

2 **From the Features taskbar, click [Sync].**

3 **Click [Sync] menu again to select [DVR] → [Advanced Options] → [Set Up Sync], and set as follows.**

- Click on the [**Create folder hierarchy on device**] to check. ***1 *2**
- The folder with artist name or album name is automatically created. This will make you find the file you want to listen to more easily.
- ***1** If [**Create folder hierarchy on device**] is checked by default, click to uncheck the box once, and click it again to check.
- ***2** After the synchronous transfer to the recorder, a file named "WMPInfo.xml" is created. If you delete this file, the ***1** may need to be set again.

2, 3

DVR Properties

Sync | Quality

Set sync options for this device.

Device name:

DVR

Sync settings

☑ Create folder hierarchy on device

☐ Start sync when device connects

Reserve space on the device for use by other programs:

0% (0 bytes)

OK | Cancel | Apply | Help

3

4 **Select the desired category from [Library] on the left, and select music files or albums to transfer to the recorder, and Drag & Drop them in [Sync List] on the right.**

5 **Click [Start Sync].**

- The file is transferred to the recorder.

4　　**5**

5

Windows Media Player 10

1 **Connect the recorder to a PC, and start Windows Media Player.**

2 **From the Features taskbar, click [Sync].**

3 **From the pull down menu on the left side window, select the play list to be transferred to the recorder, and put the check marks on the music file that you want to transfer.**

- The order of music pieces can be changed by Drag & Drop of the music file in the play list displayed.

4 **From the pull down menu on the right side window, select the drive corresponding to the recorder.**

- The recorder is recognized as a Removable Disk.
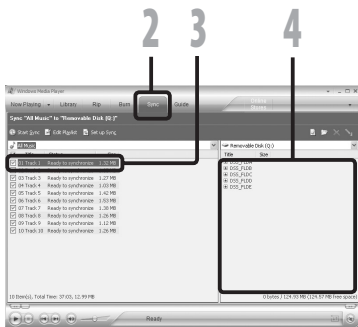
2　**3**　　**4**

5 Click [⬛] on the upper right corner, and set the synchronization options.

- Click on the [**Create folder hierarchy on device**] to check. *** 1 *2**
- The folder with artist name or album name is automatically created. This will make you find the file you want to listen to more easily.
- ***1** If [**Create folder hierarchy on device**] is checked by default, click to uncheck the box once, and click it again to check.
- ***2** After the synchronous transfer to the recorder, a file named "WMPInfo.xml" is created. If you delete this file, the *1 may need to be set again.

6 Click [**Start Sync**].

- The file is transferred to the recorder. The music file transferred to the recorder is displayed in Item on Device.

5

Using Windows Media Player

Notes

- Copying the music files with DRM purchased online music distribution service to a portable device such as this recorder may be restricted.
- To transfer the files by using Windows Media Player 9, check the Olympus website.
- If the music files are transferred to the recorder until it reaches to the maximum memory, the message [**Can't make the system file. Connect to PC and delete unnecessary file**] may appear on this recorder's display. In such a case, erase the files to make free space (hundreds of KB to dozens of MB depending on the music file sizes) for the management file. (The more capacity for the management file will be necessary as the number of the music files increases).

Copying voice file to the CD

You can transfer the voice files in the recorder to your PC and copy them to CD. For how to copy the voice files from the recorder to your PC, see "**Transfer the voice files to your PC**" (☞ P.52).

Windows Media Player 11

2, 4

1 **Insert the blank CD-R/RW into the CD-R/RW drive, and start Windows Media Player.**

2 **From the Features taskbar, click the [Burn] menu.**

3 **Select the desired category from [Library] on the left, and select voice files or albums to copy to the CD-R/RW, and Drag & Drop them in [Burn List] on the right.**

4 **Click [Burn] menu again, and select [Audio CD] or [Data CD].**

   When [Audio CD] is selected:
   • A file is converted and copied in music CD in order to play it by the audio equipment which can play CD-R/RW.

   When [Data CD] is selected:
   • Copying files with the format to be recorded.

5 **Click [Start Burn].**

3 **5**
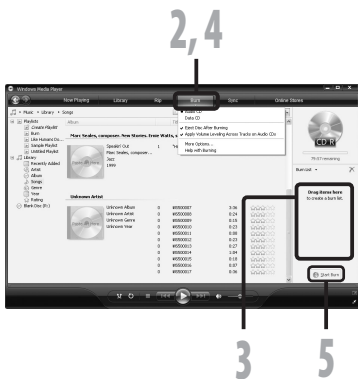
Windows Media Player 10

1 **Insert the blank CD-R/RW into the CD-R/RW drive, and start Windows Media Player.**

2 **From the Features taskbar, click [Burn] menu.**

  • Click [**Burn**] as needed after clicking [**Edit Playlist**] menu.
  • You can change the order of tracks by Drag & Drop files.

3 **Put a check mark on the voice files that you want to copy.**

4 **Select format of CD before clicking [Start Burn].**

  When [Audio CD] is selected:
  • A file is converted and copied in music CD in order to play it by the audio equipment which can play CD-R/RW.

  When [Data CD] is selected:
  • Copying files with the format to be recorded.

5 **Click [Start Burn].**

5
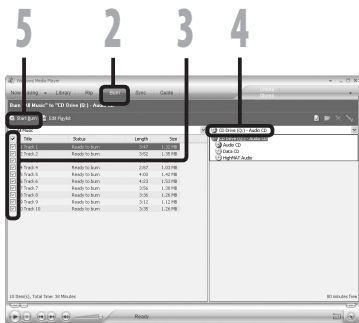
Using iTunes

Window names

① **Features taskbar**
② **Rewind button/**
   Playback, Pause button/
   Fast Forward button
③ **Volume slide**
④ **Playlist addition button**

⑤ **Shuffle button**
⑥ **Repeat button**
⑦ **Display change button**
⑧ **Disc create button**
⑨ **Browse button**
⑩ **Disc eject button**

Copying music from CD

1 **Insert the CD into the CD-ROM drive, and start iTunes.**

2 **Click [iTunes] ➔ [Preferences].**

3 **Click [Advanced] tag.**

4 **Click [Importing] to set the file format and bit rate for copying music files to your PC, and click [OK].**

[Import Using]:
Set the file format for copying music file from a CD.
[Setting]:
Set the bit rate for copying music file from a CD.
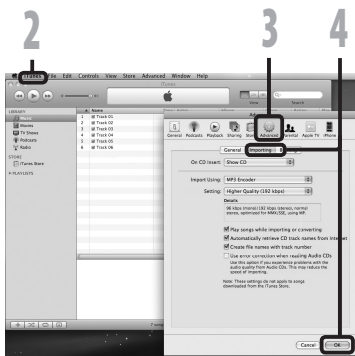
5 **Put a check mark on the music files that you want to copy.**

6 **Click [Import CD].**

Transferring music file to the recorder

You can transfer the music files saved in your PC to this recorder. For how to copy the music files from the CD to your PC, see "**Copying music from CD**" (☞ P.61).

1 **Connect the recorder to a PC, and start iTunes.**

2 **Select the play list to be transferred to the recorder, and put the check marks on the music files that you want to transfer.**

- The order of music pieces can be changed by Drag & Drop of the music file in the play list displayed.

iTunes Store

2
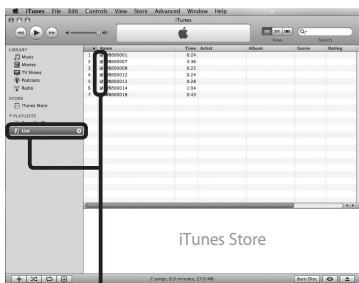
3 **Double-click the corresponding drive with the recorder, and open [Music] folder.**

- When you connect the recorder to a Mac OS, it will be recognized by the drive name of the product name on the desktop.
- Copy to [**Music**] folder of the recorder when transferring the music file.
- You can create up to 2 hierarchies in the [**Music**] folder. And up to 128 folders can be made including [**Music**] folder.
- Up to 200 files can be stored in each folder.

4 **Select the desired files, and Drag & Drop them to [Music] folder.**

Drag & Drop files here

Copying voice file to the CD

You can transfer the voice files in the recorder to your PC and copy them to CD. For how to copy the voice files from the recorder to your PC, see "**Transfer the voice files to your PC**" (☞ P.52).

1 Insert the CD-R/RW into the CD-R/RW drive, and start iTunes.

2 Click [iTunes] ➜ [Preferences].

3 Click [Advanced] tag.

4 Click [Burning] to set the CD format for copying voice files to CD-R/RW, and click [OK].

> **When [Audio CD] is selected:**
> A file is converted and copied in music CD in order to play it by the audio equipment which can play CD-R/RW.
> **When [MP3 CD] is selected:**
> Copying in MP3 format.
> **When [Data CD] is selected:**
> Copying files with the format to be recorded.
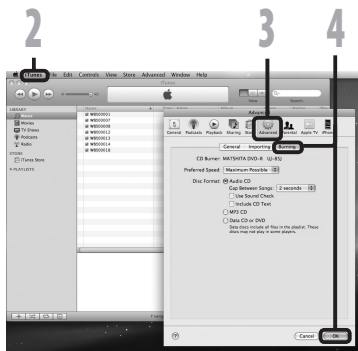
5 Select the desired playlist, and put a check mark on the voice files to copy to the CD-R/RW.

6 Click [Burn Disc].
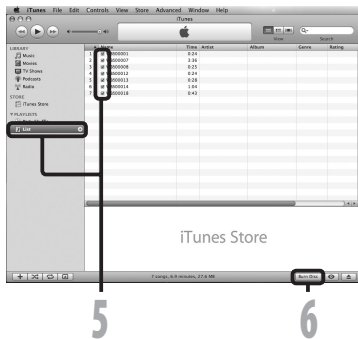
Using as external memory of the PC

In addition to its uses as an IC recorder and a music player, this recorder can also be used as external memory for a computer by storing data from a computer and reading it back out.

With the recorder connected to your PC, you can download data from the memory to your PC and upload data stored on your PC to the memory.

Windows

1 Connecting the recorder to your PC (☞ P.50).

2 Open the Explorer window.

3 Open the product name folder.

- When you open [**My Computer**], it will be recognized by the drive name of the product name.

4 Copy the data.

5 Disconnect the recorder from the PC (☞ P.51).

Macintosh

1 Connecting the recorder to your PC (☞ P.50).

- When you connect the recorder to a Mac OS, it will be recognized by the drive name of the product name on the desktop.

2 Double-click the product name icon on the desktop.

3 Copy the data.

4 Disconnect the recorder from the PC (☞ P.51).

Note

- While transmitting data, [**Busy**] is displayed, and the recording indicator light flashes. NEVER disconnect the USB while the recording indicator light is flashing. If you do, the data will be destroyed.

Other Information

Alarm message list

Message	Meaning	Explanation	Action
[Battery Low]	Low battery power.	Battery power is getting low.	Replace with new batteries (☞ P.10).
[File Protected]	Erase-locked.	Tried to delete a locked file.	Unlock the file (☞ P.36, P.38).
	For WS-500M only:		
[Music Mode]	[**MUSIC**] mode is active.	The mode switch is set to [**MUSIC**] position.	Set the mode switch to [**VOICE**] position (☞ P.17).
[Index Full]	Index full.	The file is full of index marks (maximum of 16 marks).	Erase index marks that are no longer required (☞ P.31).
[Temp Mark Full]	Tempmark full.	The file is full of Temp-marks (maximum of 16 marks).	Erase Tempmarks that are no longer required (☞ P.31).
[Folder Full]	Folder full.	The folder is full of files (maximum of 200 files).	Erase unnecessary files (☞ P.34).
[Memory Error]	Error in the memory.	Error in the memory.	This is a malfunction, so go to the store where you purchased the recorder or an Olympus service station for repair (☞ P.68).
[Licence Mismatch]	Illegally copied file.	The music files copied illegally.	Erase the file (☞ P.34).
[Memory Full]	Zero remaining memory.	No remaining memory.	Erase unnecessary files (☞ P.34).
[No File]	No file.	No files were found in the folder.	Select another folder (☞ P.18 to P.20).
[Format Error]	Formatting error.	There was an error while formatting the recorder's memory.	Reformat the memory (☞ P.46).
[Can't make the system file. Connect to PC and delete unnecessary file]	The management file cannot be created.	The file for management cannot be created due to a shortage of capacity for remaining memory.	Connect the recorder to a computer and delete any unnecessary files.

Alarm message list

Troubleshooting

Symptom	Probable cause	Action
Nothing appears on the display	The batteries are not loaded properly.	Verify that the batteries' polarities ⊕ and ⊖ are correct (☞ P.10).
	Battery power is getting low.	Replace with new batteries (☞ P.10).
	The power is off.	Turn the power on (☞ P.13).
Won't start	Battery power is getting low.	Replace with new batteries (☞ P.10).
	The power is off.	Turn the power on (☞ P.13).
	The recorder is in HOLD mode.	Release the recorder from HOLD (☞ P.14).
Unable to record	Low remaining memory.	Erase unnecessary files (☞ P.34).
	The maximum number of files has been reached.	Change to the another folder (☞ P.18 to P.21).
No playback tone heard	The earphone is connected.	Unplug the earphones to use the internal speaker.
	The volume level is set to [**00**].	Adjust the volume level (☞ P.27).
Recording level too low	The microphone sensitivity is too low.	Set the microphone sensitivity to the conference mode and try again (☞ P.23 or P.36, P.38).
	This could potentially be because the output level for the connected external devices are too low.	Adjust the output level for the connected devices.
Voice files are not recorded in stereo	The connected external microphone is monaural.	When recording while an external monaural microphone is connected, sound will only be recorded by the L-channel.
	[**Rec Mode**] is set to a monaural recording mode.	Set [**Rec Mode**] to the stereo recording mode (☞ P.36, P.38).
Cannot find the recorded Voice File	Wrong folder.	Switch to the correct folder (☞ P.18 to P.21).
Noise heard during playback	The recorder was shaken during recording.	――――
	The recorder was placed near a cell phone or fluorescent lamp while recording or during playback.	Move the recorder.

Symptom	Probable cause	Action
Unable to erase	The file is locked.	Unlock the file (☞ P.36, P.38).
	The file is read-only.	Unlock the file or cancel the read-only setting of the file on the PC.
Noise is audible through the recording monitor	Acoustic feedback is occurring.	When the built-in speaker amps and the like are connected there is a risk that audio feedback will occur while recording. It is recommended that you use earphones for the recording monitor.
		Conduct adjustments like separating the earphones from the microphone further, do not point the microphone at the earphones, lower the volume on the recording monitor, and so on.
Unable to set index marks, tempmarks	The maximum number of marks has been reached.	Erase unnecessary marks (☞ P.31).
	The file is locked.	Unlock the file (☞ P.36, P.38).
	The file is read-only.	Unlock the file or cancel the read-only setting of the file on the PC.

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Troubleshooting

Technical assistance and support

The following are contact information for technical support for Olympus recorders and software only.

- ● **Technical Hotline Number in the U.S. and Canada**
  1-888-553-4448
- ● **User Support E-mail address in the U.S. and Canada**
  distec@olympus.com
- ● **Technical Hotline Number in Europe**
  Toll free number: 00800 67 10 83 00
  available for Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom
  Charged numbers for the Rest of Europe
  + 49 180 567 1083
  + 49 40 23773 4899
- ● **User Support E-mail address in Europe**
  dss.support@olympus-europa.com

Accessories (optional)

- ● **Stereo microphone: ME51S**
  The built-in large-diameter microphone enables sensitive stereo recording.
- ● **2 channel microphone (omni-directional): ME30W**
  Two ME30 monaural microphones come in a set with a miniature tripod and a connection adapter. These are highly sensitive omni-directional microphones supported by plug-in power which are well-suited to recording musical performances.
- ● **Highly sensitive noise-cancellation monaural microphone (unidirectional): ME52W**
  This microphone is used to record sound at a distance while minimizing surrounding noise.
- ● **Tie clip microphone (omni-directional): ME15**
  Small concealing microphone with a tie-clip.

- ● **Telephone pickup: TP7**
  Earphone type microphone can be plugged into your ear while phoning. The voice or conversation over the phone can be clearly recorded.
- ● **Ni-MH rechargeable battery and charger set: BC400 (For Europe)**
  BC400 comes with an Ni-MH rechargeable battery charger (BU-400) and 4 Ni-MH rechargeable batteries (BR401) as a pack. This charger can quick charge Olympus AA or AAA Ni- MH rechargeable batteries.
- ● **Ni-MH rechargeable battery: BR401**
  High-efficiency rechargeable long life batteries.
- ● **Connecting cord: KA333**
  Connecting cord which has stereo mini-plugs (ø3.5) with resistance at both ends. Use to connect from the earphone jack output of the recorder to the microphone input jack when recording. Converting plug adapters (PA331/PA231) which convert to the monaural mini plug (ø3.5) or monaural mini plug (ø2.5) are also enclosed.

Specifications

General points

■ **Recording format:**
WMA (Windows Media Audio)

■ **Input level:**
- 70 dBv

■ **Sampling frequency:**
[**ST XQ**] mode:	44.1 kHz
[**ST HQ**] mode:	44.1 kHz
[**ST SP**] mode:	22 kHz
[**HQ**] mode:	44.1 kHz
[**SP**] mode:	22 kHz
[**LP**] mode:	8 kHz

■ **Frequency response:**
During recording mode
(Microphone jack):
[**ST XQ**] mode:	50 Hz to 19 kHz
[**ST HQ**] mode:	50 Hz to 15 kHz
[**ST SP**] mode:	50 Hz to 9 kHz
[**HQ**] mode:	50 Hz to 13 kHz
[**SP**] mode:	50 Hz to 7 kHz
[**LP**] mode:	50 Hz to 3 kHz
During recording mode
(Built-in stereo microphone):
    80 Hz to 20 kHz
During playback mode:
    20 Hz to 20 kHz

■ **Maximum working output:**
60 mW (8 Ω speaker)

■ **Maximum headphone output:**
≦ 150 mV (according to EN 50332-2)

■ **Wide band characteristic headphone output:**
75 mV ≦ (according to EN 50332-2)

■ **Recording medium:**
Built-in NAND FLASH memory
WS-500M: 2 GB
WS-400S: 1 GB

■ **Speaker:**
Built-in ø 16 mm round dynamic speaker

■ **MIC jack:**
ø 3.5 mm mini-jack, impedance 2 kΩ

■ **EAR jack:**
ø 3.5 mm mini-jack, impedance 8 Ω or more

■ **Input power requirement:**
Batteries: AAA battery (LR03) or Olympus Ni-MH rechargeable battery

■ **External dimensions:**
94.8 mm × 38 mm × 11 mm
(without protrusions)

■ **Weight:**
46 g (including battery)

■ **Operating temperature:**
0°C - 42°C/ 32°F - 107.6°F

Guide to recording times

■ **WS-500M (Built-in flash memory 2 GB):**
[**ST XQ**] mode:	34 h. 30 min.
[**ST HQ**] mode:	69 h. 40 min.
[**ST SP**] mode:	139 h. 25 min.
[**HQ**] mode:	139 h. 25 min.
[**SP**] mode:	247 h. 10 min.
[**LP**] mode:	544 h. 55 min.

■ **WS-400S (Built-in flash memory 1 GB):**
[**ST XQ**] mode:	17 h. 20 min.
[**ST HQ**] mode:	34 h. 45 min.
[**ST SP**]] mode:	69 h. 35 min.
[**HQ**] mode:	69 h. 35 min.
[**SP**] mode:	137 h. 00 min.
[**LP**] mode:	272 h. 25 min.

Notes

• The above values are strictly rough guides.
• Available recording time may be shorter if many short recordings are made
(The displayed available recording time and recorded time are approximate indications).

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Specifications

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• A maximum recording time per file is set for each mode. Even if the recorder's memory is not used up, recording cannot be continued beyond the limit.

Maximum recording time per file	
[**ST XQ**]	26 h. 40 min.
[**ST HQ**]	26 h. 40 min.
[**ST SP**]	53 h. 40 min.
[**HQ**]	26 h. 40 min.
[**SP**]	53 h. 40 min.
[**LP**]	148 h. 40 min.

Guide to battery life

■ **WS-500M ([VOICE] mode):**
WS-400S:
During recording mode:
[**ST XQ**] mode: 15 h. 30 min.
[**LP**] mode: 21 h.

During voice file playback mode (All Playback Mode):
Alkaline battery
Built-in speaker: 12 h.
Earphone: 26 h.
Ni-MH Rechargeable battery
Built-in speaker: 12 h.
Earphone: 22 h.

■ **WS-500M ([MUSIC] mode):**
During WMA file (128 kbps) playback mode (All Playback Mode):
Alkaline battery
Earphone: 26 h.
Ni-MH Rechargeable battery
Earphone: 22 h.

During MP3 file (128 kbps) playback mode (All Playback Mode):
Alkaline battery
Earphone: 25 h.
Ni-MH Rechargeable batter
Earphone: 21 h.

Notes

• The above values are strictly rough guides.
• Battery life is measured by Olympus. It varies greatly according to the type of batteries used and the conditions of use.

Guide to recordable number of songs

WS-500M: 500 songs
WS-400S: 250 songs
(At 128 kbps, 4 minutes per song)

Specifications and design are subject to change without notice.

Declaration of Conformity

Model Number	: WS-500M/WS-400S
Trade Name	: DIGITAL VOICE RECORDER
Responsible Party	: OLYMPUS IMAGING AMERICA INC.
Address	: 3500 Corporate Parkway, P.O. Box 610, Center Valley, PA 18034-0610, U.S.A.
Telephone Number	:1-888-553-4448

This device Complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

Canadian RFI

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.
Cet appareil numérique ne dépasse pas les limites de la Catégorie B pour les émissions de bruit radio émanant d'appareils numériques, tel que prévu dans les Règlements sur l'Interférence Radio du Département Canadien des Communications.

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